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DIETS OF FAMILIES OF EMPLOYED WAGE EARNERS AND CLERICAL WORKERS IN CITIES

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This analysis of the content, cost, and nutritive adequacy of diets of families of employed wage earners and low-salaried clerical workers was made by the Bureau of Home Economics with the cooperation of the Works Progress Administration, as a report on Federal Project No. 511, official project 65–25–797, and State of Maryland Project No. 7014, official project 265–25–6002.

The study was based on about 4,000 records of a week's food consumption, placed at the disposal of the Bureau of Home Economics through the courtesy of the Cost of Living Division of the United States Bureau of Labor Statistics. The records were collected in 1934–37 as part of a study of income and disbursements for family living.

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DIETS OF FAMILIES OF EMPLOYED WAGE EARNERS AND CLERICAL WORKERS IN CITIES

INTRODUCTION

Growing recognition of the relation of food to health and its consequent social implications has created widespread interest in estimates of the adequacy of diets of different population groups.

The first attempt in this country to make such an evaluation was that of Atwater in 1886 (*32*).[1] In 1894 Congress appropriated special funds for the study of the food and nutrition of man, and by 1898, the Federal Office of Experiment Stations, headed by Atwater, had brought together records of food consumption from over 200 families and also from a number of boarding houses in several States (*5*). The reports of this early work include a description of the consuming group, the quantities and cost of different articles of food consumed, the protein, fat, and carbohydrate content of the diet, and the energy yield of the food in relation to cost. This was as detailed an evaluation of diets from a nutritional viewpoint as was possible in view of the then limited knowledge of physiological requirements. The need for dietary standards was recognized, however, and it was to this end that much of the subsequent work in nutrition was directed.

Following the work of Atwater and his colleagues, the most important contribution was that of Sherman and Gillett (*46*) in 1914–15, in a study of the diets of 92 low-income families, most of whom lived in New York City. This study was noteworthy for the completeness of the dietary analysis, particularly with reference to nutritive returns for money spent. As a basis for judging adequacy, dietary allowances were tentatively adopted not only for calories and protein, but for calcium, phosphorus, and iron as well. Although the ensuing 20 years have brought great advances in the science of nutrition, the allowances proposed by Sherman and Gillett for an adult man have been changed but little.

Since then many dietary studies have been made, some in one part of the country, some in another, each adding to our knowledge of American food habits. One of the most extensive investigations so far undertaken is the one here reported. It deals with the content, nutritive value, and economy of the food available for consumption among families of employed wage earners and clerical workers in 43 industrial centers in 8 major geographical regions of the United States.

The study is based on dietary records covering 1 week each, obtained during the period December 1934–February 1937. Most of the records were obtained from white families. Enough, however, were secured also from southern Negro families to permit a comparison of racial food consumption in that part of the country. The most intensive analysis has been made of records obtained in cities of the North Atlantic, East North Central, Pacific, and East South Central regions, both because more data were secured in these than in other regions and because there was more adequate representation for each season.

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[1] Italic numbers in parentheses refer to Literature Cited, p. 101.

The uses of information on food consumption are manifold. Quantitative data interpreted in the light of present knowledge of food values and nutritional needs are basic to programs designed to improve the general welfare. Such facts are needed by public and private agencies charged with the formulation of educational programs and the development of social policy. Such data are also indispensable in determining the foods to be included and the weight to be assigned to each in the pricing of food budgets and in the construction of food-cost indexes. And because they serve to define markets and to indicate the effect on consumption of changes in economic well-being, figures on food consumption are of value to all concerned with the planning of agricultural production, and to all engaged in the processing or distribution of food.

DESCRIPTION OF FAMILIES COMPRISING THE SAMPLE

The families of wage earners and clerical workers participating in this special food study were selected from among those cooperating in the study of income and disbursements made by the United States Bureau of Labor Statistics in 1934–36 (*62, 63, 64, 65, 66, 67*). These in turn were chosen by random sampling from employers' lists, and to be eligible for the study, must have met the following qualifications:

> A "family," for purposes of the study, comprised two or more persons pooling their income, at least two of whom lived together and shared a common table.
>
> "Wage earners" included skilled, semiskilled, and unskilled workers as listed in the classification prepared by Edwards, of the United States Bureau of the Census (*54*). "Low-salaried clerical workers" included all those listed as clerks or kindred workers in Edwards' classification who earned no more than $2,000 in the report year, or $200 in any month.
>
> A family that had received relief or whose total money income was less than $500 during the preceding 12 months was ineligible. Each family must have had at least one earner employed at least 28 hours in each of 36 weeks during the report year. In the case of families of which the chief earner was employed in an industry normally seasonal, the family was included in the sample if the earner had had employment for three and one-half 8-hour days in each of 30 weeks.

The elimination from the sample of families that during the report year had received relief, or had been employed for a shorter period than that specified, or had received incomes under $500, means that the group studied represents a higher economic level than characterizes city wage earners as a whole.

For most of the communities where food records were obtained table 70 shows the number of families of two or more persons on relief, when the relief load was at its maximum during the period covered by the disbursements study. No information is available on the total population of the communities for the same period. Hence, table 70, compiled from reports of Williams and Hanson (*62, 63, 64, 65, 66, 67*), gives for families of two or more persons the percentage that those on relief rolls in the month specified were of the total number of such families in these communities in 1930. For white families in communities in the North Atlantic region this percentage ranged from 11 to 22; in the East North Central region, from 12 to 22; in the East South Central region, from 4 to 36; and in the Pacific region, from 11 to 16. Corresponding figures for Negro families in the Southeast were 19 to 51 percent.

No data are available as yet on the proportion of families excluded because of low income or a short period of employment. But in

1935–36, according to estimates of the National Resources Committee (*56*), 4.3 percent of the nonrelief white families in large North Central cities (population of 100,000 and over) had incomes under $500 a year. In southern urban communities (population 2,500 and over), 6.0 percent of the nonrelief white families and 47.3 percent of the nonrelief Negro families had incomes under $500.

It was planned to obtain food records from about one-fourth of the total number of families that cooperated in the general study of family expenditures, and insofar as possible to obtain records from the same families in each season of the year. Many of the families that furnished schedules on income and expenditure felt unable to undertake the work of keeping an accurate record of the quantities of food that they used during a week. The families first visited were chosen at random from among those who expressed a willingness to cooperate. But many of them, after keeping food records for one week, were either unable or unwilling to continue in the succeeding seasons. In such cases the family next on the list was visited with a request for a food record for the succeeding periods. In some cities the list of those willing to cooperate was practically exhausted before the record-keeping period was over. There was, therefore, a certain selective bias in the sample of families keeping food records.

So far as economic status is concerned, the families that kept food records did not prove to bear the same relation in each region to the sample of families participating in the general study of income and money disbursements. In cities in the North Atlantic region, 19 percent of the families keeping food records spent for all goods and services less than $300 per consumption unit [2] a year; 43 percent, between $300 and $500, and 38 percent, $500 and over. Of those participating in the general study, the percentages in the three economic groups were 15, 39, and 46, respectively. About this same relationship was found in East North Central cities.

In East South Central cities, the percentages of white families in these three economic groups were 36, 41, and 23 for those cooperating in the food study, and 21, 38, and 41, respectively, for those in the general study. The food study in these cities, therefore, dealt with a group of families of lower economic status than did the general study. Among southern Negro families, on the other hand, the percentage of families in the three economic levels was identical in the general study and in the food study.

In Pacific coast cities the families included in the food study represented a higher economic level than those cooperating in the general study. Only 6 percent of those keeping food records were spending less than $300 a year per consumption unit for all goods and services, whereas 19 percent of those in the general study were in this economic group. Fifty-one percent of the families included in the food study were spending per consumption unit $500 or more a year for all goods and services, whereas 44 percent of those included in the general study were at this level.

---

[2] Expenditures for all goods and services per consumption unit were obtained by adding together (1) expenditure for food per food-expenditure unit, (2) expenditures for clothing per clothing-expenditure unit, and (3) expenditures per head for all other goods and services. Family size in food- and clothing-expenditure units was computed by the use of two scales, each expressing estimated expenditures for persons of different age, sex, and activity, in relation to expenditures for a man engaged in moderately active muscular work. Each person in a family was considered equally important with reference to expenditures for all other goods and services.

These differences in economic level and the consequent difference in level of expenditure for food should be taken into account in interpreting the better-than-average dietary picture found on the Pacific coast, and the poorer-than-average picture found among white families in the Southeast.

INFORMATION AFFORDED BY THE FOOD RECORDS

Each food record contains information on the kind, quantity, and money value of the food procured by a household during a week. It gives a list of the persons and the number of meals which each received from the family food supply, together with data on the height, weight, and activity of each family member. Information is also given on income during the 3 months preceding the study and also on types of retail food outlets patronized. Some of these facts were secured by the Bureau of Labor Statistics for the construction of seasonal cost-of-food indexes; others for the special purpose of enabling the Bureau of Home Economics to analyze the content, adequacy, and economy of the diets. The forms and instructions for collecting the dietary records were prepared jointly by the two Bureaus.

The consumption of food during the week was determined by taking an inventory, by weight, of food on hand at the beginning and end of the period, and obtaining a day-by-day record of the food purchased or brought into the house from market, garden, cellar, or other source of supply. Household scales and other equipment necessary for weighing or measuring foods were supplied where needed.

A trained field agent assisted the housewife in taking accurate inventories and in keeping careful accounts of the weights of daily food purchases. The field worker visited the home daily, if necessary, to assure completeness of the record. A complete description of each food was entered as a guide in estimating the nutritive value of the diet.

The original plan provided also for the recording of the quantity of inedible refuse, plate scraps, food fed to animals, and other edible food discarded as waste, in order to get accurate data on food intake. Early returns from families indicated, however, that aside from inedible refuse such as bones, parings, or eggshells, very little food refuse or waste was being recorded. Although there were full instructions on the subject, it appears that housewives either forgot or would not take the trouble to record or to save for the agent's inspection what seemed to them insignificant quantities of food. In view of this situation the attempt to secure information on food refuse and waste was abandoned. Hence the data presented on quantities of food refer to what was brought into the kitchen rather than to physiological intake. In computing nutritive value, use was made of average figures on inedible refuse, but no deductions were made for waste of edible food.

The money value of the food reported was based on prices actually paid, in the case of purchased foods. For the few foods which were home-grown or received as a gift, an imputed value was assigned on the basis of current retail prices.

In order to estimate the combined food needs of each household group, certain information was obtained regarding each person fed from the family food supply. For each regular member of the household this included age, height, weight, sex, and a statement of the major kinds of work or activity engaged in day by day, and the approximate time involved. In the case of guests, age and sex were recorded for children, and sex for adults. These data were of value in estimating the energy needs of individuals.

The income figures obtained with each food record refer to the 3 months preceding the week of the food study, inasmuch as it was planned to obtain four records, one in each season of the year, from each family.

CLASSIFICATION OF RECORDS FOR ANALYSIS

In this dietary analysis, the records have been classified by region and color of family, by season, and by level of expenditure for food. In addition, when the number obtained made it feasible, the records were further classified by the composition of the household.

REGION

The eight major geographical regions used in classification were: North Atlantic (New England and Middle Atlantic) States, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific States. Records from Negro families living in Richmond, Va., and New Orleans, La., were combined with those in East South Central cities to give a group designated throughout this report as southern Negro.

Food records were obtained from white families in the following cities, by region:

New England: Berlin, Claremont, Concord, Dover, Keene, Littleton, Manchester, Nashua, and Portsmouth, N. H.; Boston and Springfield, Mass.
Middle Atlantic: New York and Rochester, N. Y.; Lancaster, Philadelphia, and Pittsburgh, Pa.
East North Central: Indianapolis, Ind.; Detroit, Grand Rapids, Lansing, and Marquette, Mich.; Cincinnati and Columbus, Ohio; Milwaukee, Wis.
West North Central: Minneapolis and St. Paul, Minn.; St. Louis, Mo.
South Atlantic: Jacksonville, Fla.; Norfolk and Richmond, Va.
East South Central: Birmingham and Mobile, Ala.; Memphis, Tenn.
West South Central: Dallas and Houston, Tex.
Mountain: Reno, Nev.; Salt Lake City, Utah.
Pacific: Los Angeles, Oakland, Sacramento, and San Francisco, Calif.; Seattle, Wash.

Records were obtained from Negro families in the following cities, by region:

Middle Atlantic: New York, N. Y.; Philadelphia and Pittsburgh, Pa.
South: Richmond, Va.; Birmingham and Mobile, Ala.; Memphis, Tenn.; New Orleans, La.

The food records contributed by Negro families both in Middle Atlantic and in southern cities have been included in the classification of families according to food expenditure. However, there were too few except from the South to include in the complete dietary analysis.

SEASON

In order to determine the extent to which season of the year affects the quantity and kind of food consumed and the nutritive value of the diets, food records from each region were grouped according to the season in which they were collected. The seasons referred to in this study are defined as follows: Spring—March, April, May; summer—June, July, August; fall—September, October, November; winter—December, January, February.

LEVEL OF EXPENDITURE FOR FOOD

Studies of family living show almost invariably that food is the item for which expenditure is largest. Because the average expenditure for food tends to increase as family earnings increase, income is frequently used as a basis of classification in studies of food consumption. However, there is wide variation in the amounts of money spent for food by individual families with the same income, even when the influence of family size is ruled out. In studies of the adequacy and economy of diets, an additional variable is eliminated if diets procured for the same expenditure are compared rather than diets obtained by families of the same incomes. For these reasons, expenditure for food has been used as a major basis of classification throughout this study. To make expenditures of families of varying size as comparable as possible, the total expenditures for food have been reduced both to a per-person and to a food-expenditure-unit basis.

In determining the expenditures per person, or per head, total food expenditures for the week were divided by the number of persons comprising the family or household. Since some or all members might have eaten one or more meals away from home during the week of the study, or since one or more meals might have been served at home to guests, the total number of meals served to all persons was divided by 21 to determine the number of persons to which each household was equivalent. In this computation, based only on the number of meals, each individual was considered equally important, regardless of age.

For many purposes it is more satisfactory to deal with food expenditures on a food-expenditure-unit basis than on a per-capita basis. This is due to the fact that families must spend more to feed adults than young children and more to feed adolescent children than moderately active adults. As a means of computing relative expenditures, food budgets for different individuals, shown in table 1, were developed from earlier studies of the food consumption of urban and village families spending moderate amounts for foods. From the cost of these budgets at 1935 retail food prices, a scale of relatives was derived in which the expenditures for the food of a moderately active man were taken as unity, and the expenditures for persons of different age, sex, and activity were expressed as a fraction of this value. This scale, shown in table 2, was used to compute the number of food expenditure units to which each family was equivalent.

Expenditures for food by families included in this study were computed first on a per-capita basis, and the records were classified into 10 groups according to the amounts spent. Inasmuch as the collection of records extended over a 2-year period, during which there were significant changes in food prices, the exact intervals used for classification were determined by the level of retail food prices in the season during which the record was made. Thus the records obtained in the summer of 1935 were classified by intervals corresponding on a weekly per-capita basis to 62 cents; whereas in the summer of 1936, due to a rise in food prices, intervals of 65 cents were necessary to represent comparable purchasing power.

Table 1.—*Estimated food purchases:*[1] *Quantities priced in deriving expenditure scale*

Sex, age, and activity	Yearly quantities of—										
	Flour, cereals	Milk	Potatoes, sweetpotatoes	Mature beans and peas, nuts	Tomatoes, citrus fruits	Leafy, green, and yellow vegetables	Other vegetables and fruits	Butter, other fats, oils, fat meat	Sugars	Lean meat, poultry, fish	Eggs
Men 20–74 years:	*Lbs.*	*Qts.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Doz.*
Moderate work	200	91	135	16	50	60	200	40	77	125	15
Active work	225	91	153	20	50	60	200	52	80	150	15
Men 75 years and over	175	91	135	8	50	70	200	40	50	100	18
Women 20 years and over:											
Moderate work	175	91	135	8	50	70	210	40	50	100	18
Active work	192	91	150	12	50	65	210	50	77	120	18
Boys:											
16–19 years	225	91	160	12	50	60	210	55	80	150	18
13–15 years	192	182	150	12	50	65	210	50	77	120	18
11–12 years	175	182	135	8	50	70	210	40	50	100	18
9–10 years	170	182	130	8	50	70	205	32	35	75	24
7–8 years	150	182	125	7	50	70	200	25	25	60	24
4–6 years	100	182	110	3	50	70	150	12	12	25	24
Girls:											
14–19 years	175	182	135	8	50	70	210	40	50	100	18
11–13 years	170	182	130	8	50	70	205	32	35	75	24
8–10 years	150	182	125	7	50	70	200	25	25	60	24
4–7 years	100	182	110	3	50	70	150	12	12	25	24
Children 2–3 years	70	230	100	-------	50	60	100	8	5	10	24
Children under 2 years	65	275	40	-------	50	60	42	4	-------	-------	25
Average per capita, United States population, 1930	175	168	135	11	50	65	194	38	55	100	19

[1] Based on consumption of urban and village families spending moderate amounts for food.

Table 2.—*Expenditures for estimated food purchases for different individuals and expenditure scale*

Sex, age, and activity	Yearly expenditures[1] for estimated food purchases	Expenditure scale
Men 20–74 years:	*Dollars*	*Units*
Moderate work	120	1.00
Active work	134	1.12
Men 75 years and over	110	.92
Women 20 years and over:		
Moderate work	110	.92
Active work	123	1.02
Boys:		
16–19 years	136	1.13
13–15 years	132	1.10
11–12 years	121	1.00
9–10 years	112	.93
7–8 years	102	.85
4–6 years	77	.64
Girls:		
14–19 years	121	1.00
11–13 years	112	.93
8–10 years	102	.85
4–7 years	77	.64
Children 2–3 years	68	.57
Children under 2 years	63	.53
Average per capita, United States population, 1930	112	.93

[1] Based on quantities listed in table 1 at 1935 average retail prices for 51 cities as reported by the United States Bureau of Labor Statistics.

TABLE 3.—*Intervals* [1] *used in classification of food records*

Level of food expenditure	Weekly food expenditure		Level of food expenditure	Weekly food expenditure	
	Per capita	Per food-expenditure unit		Per capita	Per food-expenditure unit
1	Under $0.63	Under $0.67	6	$3.13–$3.74	$3.33–$3.99
2	$0.63– 1.24	$0.67– 1.32	7	3.75– 4.37	4.00– 4.66
3	1.25– 1.87	1.33– 1.99	8	4.38– 4.99	4.67– 5.32
4	1.88– 2.49	2.00– 2.66	9	5.00– 5.62	5.33– 5.99
5	2.50– 3.12	2.67– 3.32	10	5.63 and over	6.00 and over

[1] Adjusted to 1935 levels by U. S. Bureau of Labor Statistics index of retail food costs.

In this report the levels of expenditure are stated in terms of the price level of 1935, since that was the year in which the majority of the food records were obtained. For the population as a whole, 100 individuals are equivalent, so far as estimated food expenditures are concerned, to about 93 moderately active men. Hence for the year 1935 as a whole intervals of 63 cents a week on a per-capita basis must be broadened to approximately 67 cents on an adult-food-expenditure-unit basis, if expenditure groups on the two bases are to correspond. For the convenience of the reader, table 3 shows the intervals that were used in classification of food records by weekly expenditure for food on both a per-capita and a food-expenditure-unit basis.

HOUSEHOLD COMPOSITION

The plan to further classify food records according to household composition was carried out wherever the number of cases at a given expenditure level was large enough to warrant subdivision. This was done for the purpose of comparing the per-capita food-consumption habits of families of different size and composition. The three general categories used for this classification were defined as follows: (1) Adults (persons over 16 years) only; (2) two adults and one or more children under 16 years; (3) three or more adults and one or more children under 16 years of age.

EXPENDITURES FOR FOOD

FOOD EXPENDITURES AS RELATED TO INCOME

Food usually takes the largest share of the family income, in spite of the keen competition of other items in the budget. Most families spend between 25 and 40 percent of their income for food. With increases in income, the number of dollars spent for food increases also, but usually less rapidly than income; hence the percentage spent for food tends to fall somewhat. At any given income level, there usually is a considerable variation in food expenditures, reflecting variations in family size or composition, standards of living, and perhaps special circumstances demanding adjustments in spending patterns.

A study of the incomes of families during the 3 months immediately preceding the week of the food record in relation to the food expenditures there listed, throws some light on the resources necessary to support different levels of food expenditure. The relationship can be seen fairly clearly in table 4, in which both income and food expenditures are expressed on a per-capita basis.

Weekly expenditures of $1.25–$1.87 a person for food were made by groups of families whose weekly income per person averaged in different regions from somewhat less than $5 to a little over $6. Expenditures of $2.50–$3.12 a person a week for food were made by those with average income ranging from a little over $8 to slightly more than $10 a person a week. Food expenditures of $3.75–$4.37 a person were made by families whose average weekly income ranged from about $12 to somewhat over $15 for each family member. There was, as a rule, an inverse relation between per-capita food expenditures and average family size—the smaller the family, the higher the average expenditure a person for food at each family income level.

Table 60 provides further information on income and food expenditures, by season.

Table 4.—*Average weekly per-capita income of families spending specified sums for food, by color of family and region*

Color of family and region	Families	Average weekly per-capita income of families with weekly per-capita food expenditures[1] of—					
		$0.63–1.24	$1.25–1.87	$1.88–2.49	$2.50–3.12	$3.13–3.74	$3.75–4.37
White:	*Number*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
North Atlantic	843	----------	4.88	6.49	8.10	8.89	11.97
East North Central	381	----------	5.39	7.06	9.04	9.97	11.73
West North Central	112	----------	5.49	6.05	8.96	11.13	----------
South Atlantic	98	----------	6.11	7.28	10.19	11.76	----------
East South Central	282	3.48	5.01	7.41	9.60	----------	----------
West South Central	39	----------	4.96	8.11	9.77	----------	----------
Mountain	76	----------	5.01	6.78	8.53	11.81	----------
Pacific	441	----------	----------	7.92	9.21	12.54	15.51
Negro:							
South	222	2.96	4.94	7.53	9.08	----------	----------

[1] See footnote 1, table 3.

The range in average percentage of family income spent for food was fairly wide in each food-expenditure class as between regions, as shown in table 5. Among families spending $1.25–$1.87 a person a week for food, this item averaged almost 33 percent of the income in the case of North Atlantic families, but only a little over 24 percent of the income in the case of South Atlantic white families. About this same range can be seen in each food-spending class. The averages for each region in any food-spending group represent a fairly wide range. Some families economize on food in order to gratify other desires or satisfy other needs. Other families customarily accord food an unusual prominence in the budget. A high level of per-capita expenditures for food often is found among low-income families, requiring a high percentage of the money for family living.

In the analysis of disbursements for all goods and services made by the United States Bureau of Labor Statistics, expenditures per consumption unit[3] have been used as an indication of economic level. The data on which these expenditures were computed refer to a 12-month period ended from 1 week to several months prior to the taking of the week's food record. Only an approximate association, therefore, can be expected between this measure of economic well-being and the level of food expenditure as given in the record.

---

[3] See footnote 2.

TABLE 5.—*Percentage of family income allotted to food by families spending specified sums for food, by color of family and region*

Color of family and region	Families	Proportion of income allotted to food by families with weekly per-capita food expenditures [1] of—					
		$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37
White:	*Number*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
North Atlantic	843	----------	32.8	34.0	35.0	37.0	34.0
East North Central	381	----------	29.8	31.1	31.4	34.3	35.7
West North Central	112	----------	29.8	35.2	30.5	30.2	----------
South Atlantic	98	----------	24.4	30.2	26.8	28.3	----------
East South Central	282	30.3	31.4	28.8	28.8	----------	----------
West South Central	39	----------	29.4	25.3	27.7	----------	----------
Mountain	76	----------	32.0	31.8	32.1	29.1	----------
Pacific	441	----------	----------	28.1	30.6	27.0	26.2
Negro:							
South	222	32.0	31.2	28.3	30.4	----------	----------

[1] See footnote 1, table 3.

Table 6, presenting these data, brings out two points: (1) With increasing economic well-being there was a tendency to spend more money for the food of each person. (2) There was a considerable range in per-capita expenditures for food at each economic level. Of the white families whose expenditures for all goods and services in a year were under $300 per unit, three-fourths or more were spending between $1.25 and $2.49 a person a week for food. At higher economic levels not only is a greater proportion of families to be found in the higher food-expenditure groups, but there also tends to be a wider range in food expenditure than was found at the lowest economic level. This trend is particularly apparent in the data for North Atlantic and Pacific families. For example, of the 302 North Atlantic families spending in a year for all goods and services $500 and over, averaging $681 per consumption unit, 17 percent spent $1.88–$2.49 a person a week for food; 22 percent, $2.50–$3.12; 29 percent, $3.13–$3.74; 17 percent, $3.75–$4.37; and 12 percent spent $4.38 and over a person a week.

More Negro than white families in this study were living on a low economic plane, as table 6 shows. Nearly two-thirds of the entire number of Negro families were spending less than $300 a year for all goods and services, with an average of $207 a consumption unit; whereas only about 18 percent of white families were at this economic level. Only a very small proportion, about 5 percent, of Negro families spent over $500 a unit for all living, as compared with 37 percent of the white families.

A large proportion of Negro families spent very small amounts for food. In the lowest economic group, the food of half of the families was valued at only $0.63–$1.24 a person a week.

Table 6.—*Number of families [1] in different economic groups, 1933–35, by color of family, and region, and percentage distribution by level of expenditure for food, 1934–36*

Total expenditures per consumption unit [2] in a year by color of family and region		Families	Proportion of families with weekly per-capita food expenditures [3] of—						
			$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37	$4.38 and over
			and proportion of families with weekly food expenditures [3] per food-expenditure unit of—						
Range	Average		$0.67–$1.32	$1.33–$1.99	$2.00–$2.66	$2.67–$3.32	$3.33–$3.99	$4.00–$4.66	$4.67 and over
Under $300:									
White:	*Dollars*	*Number*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
North Atlantic	250	157	1	31	48	15	4	0	1
East North Central	252	53	--------	49	38	11	0	2	--------
West North Central	225	16	--------	50	44	6	0	--------	--------
South Atlantic	244	15	--------	40	46	7	7	--------	--------
East South Central	223	94	12	65	21	2	--------	--------	--------
West South Central	221	9	--------	56	33	11	--------	--------	--------
Mountain	248	12	--------	42	33	17	8	--------	--------
Pacific	256	27	--------	22	59	11	8	0	
Negro:									
South	207	133	50	37	10	3	--------	--------	--------
$300–$499:									
White:									
North Atlantic	399	343	0	7	35	30	20	5	3
East North Central	397	155	--------	15	30	38	15	2	--------
West North Central	406	58	--------	12	24	40	24	--------	--------
South Atlantic	387	44	--------	25	38	30	7	--------	--------
East South Central	384	108	3	38	40	19	--------	--------	--------
West South Central	371	12	--------	33	59	8	--------	--------	--------
Mountain	418	43	--------	9	47	37	7	--------	--------
Pacific	400	179	--------	7	40	37	12	1	3
Negro:									
South	369	67	18	42	24	16	--------	--------	--------
$500 and over:									
White:									
North Atlantic	681	302	--------	3	17	22	29	17	12
East North Central	635	97	--------	5	26	41	23	5	--------
West North Central	691	36	--------	3	14	33	50	--------	--------
South Atlantic	655	37	--------	8	24	52	16	--------	--------
East South Central	691	61	2	10	46	42	--------	--------	--------
West South Central	664	16	--------	13	56	31	--------	--------	--------
Mountain	673	17	--------	6	29	35	30	--------	--------
Pacific	701	212	--------	--------	20	26	24	16	14
Negro:									
South	564	10	20	20	50	10	--------	--------	--------

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[1] Except in North Atlantic and Pacific regions, only families are included for which detailed dietary analyses were made (p. 15). Unless 10 or more records were available from a region at any level of expenditure, they were seldom analyzed in detail.

[2] For description, see p. 3.

[3] See footnote 1, table 3.

DISTRIBUTION OF FAMILIES BY EXPENDITURE FOR FOOD

Important though the economic position of the family is in determining the level of food expenditure, there is, as has been pointed out, a certain advantage to a nutritional analysis in classifying families by their expenditures for food per unit, rather than by income. As discussed in an earlier section, the classification in this study has been made by level of food expenditure both per person and per food-expenditure unit. Table 7 shows the number of records accepted for analysis from each region and their distribution by food expenditure a person a week. Additional information, showing the number of records by season, as well as by region and level of food expenditure is presented in table 58.

TABLE 7.—*Number of food records accepted, by color of family and region, and percentage distribution by level of expenditure for food per capita*

Color of family and region	Records	Percentage of records in which weekly food expenditure [1] per capita was found to be—									
		Under $0. 63	$0. 63–$1. 24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37	$4.38–$4.99	$5. 00–$5.62	$5.63 and over
	Number	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
White:											
New England	658	0	0. 5	12. 5	25. 8	27. 2	17. 3	9. 7	3. 8	1. 4	1. 8
Middle Atlantic	742	0	. 8	10. 1	27. 4	23. 3	17. 6	9. 3	5. 0	3. 4	3. 1
East North Central	717	0	1. 7	14. 5	26. 4	26. 8	14. 9	7. 9	4. 3	1. 8	1. 7
West North Central	198	0	. 5	12. 1	23. 3	24. 7	18. 7	10. 1	7. 1	2. 0	1. 5
South Atlantic	261	0	1. 5	18. 4	29. 1	26. 1	13. 4	6. 9	3. 4	. 8	. 4
East South Central	426	. 5	7. 7	31. 2	29. 6	16. 7	8. 2	4. 5	. 9	. 5	. 2
West South Central	91	0	2. 2	24. 2	34. 0	16. 5	12. 1	6. 6	2. 2	2. 2	0
Mountain	168	0	3. 0	14. 3	35. 1	26. 2	10. 1	6. 5	3. 6	. 6	. 6
Pacific	688	. 1	. 6	8. 0	26. 0	27. 0	16. 9	11. 0	4. 7	3. 4	2. 3
Negro:											
Middle Atlantic	97	0	5. 2	23. 7	24. 7	13. 4	9. 3	8. 2	7. 2	6. 2	2. 1
South	311	. 6	34. 1	33. 4	15. 8	9. 0	4. 8	1. 3	. 7	0	. 3

[1] See footnote 1, table 3.

From these figures it is apparent that of the white wage-earner families included in this food study, those living in the East, North, and far West were spending more for food than those in southern cities. From 16 to 21 percent of the families in New England, Middle Atlantic, East North Central, West North Central, and Pacific regions were spending $3.75 or more for food a person a week. These figures may be compared with the 11 to 12 percent in South Atlantic, West South Central, and Mountain cities, and only 6 percent in the East South Central cities.

Negro families in southern cities were spending least of all for food. Less than 3 percent were spending as much as $3.75 a person in a week, while almost a quarter of the Negro families in Middle Atlantic cities were spending this much or more.

From 11 to 17 percent of the families in the North Atlantic, North Central, and Mountain regions spent $1.87 or less a person a week for food. In this same food-spending class were also found from 20 to 39 percent of the white families in the South; whereas only 9 percent of Pacific coast families were spending so little. Among Negro families 29 percent of those studied in the Middle Atlantic region were spending less than $1.88 a person a week for food as compared with 68 percent in southern cities.

For white families in North Atlantic, East North Central, East South Central, and Pacific cities and for Negro families in Middle Atlantic and southern cities, data on expenditures for food are presented graphically in figures 1 and 2, using cumulative percentage curves (ogives) to show the distribution. These curves enable the reader to estimate rapidly the proportion of the families spending any given amount for food. They show, for example, the median per-capita food expenditure of families in different regions. Half of the families were spending less, and half more, than the following amounts a person a week:

White families:	
North Atlantic	$2. 75
East North Central	2. 65
East South Central	2. 10
Pacific	2. 85
Negro families:	
Middle Atlantic	2. 40
South	1. 55

The ogives also enable one to see how much the majority of families were spending for food. Disregarding the extremes, it can be seen that the middle half of the families in the East North Central cities, for example, were spending from about $2.10 to $3.35 a person a week.

The percentage distribution of records by level of expenditure for food per food-expenditure unit is given in table 8 for the use of those students who wish a classification somewhat more precise than per-capita figures afford. This distribution is very similar to that derived from the per-capita classification, and the observations made concerning the latter apply, in general, to both. Table 59 shows the total number received by season as well as by region and level of food expenditure.

TABLE 8.—*Number of food records accepted, by color of family and region, and percentage distribution by level of expenditure for food per food-expenditure unit*

Color of family and region	Records	Percentage of records in which weekly food expenditure [1] per food-expenditure unit was found to be—									
		Under $0.67	$0.67-$1.32	$1.33–$1.99	$2.00–$2.66	$2.67–$3.32	$3.33–$3.99	$4.00–$4.66	$4.67–$5.32	$5.33–$5.99	$6.00 and over
	Number	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
White:											
New England	658	0	0. 3	10. 2	27. 5	27. 7	17. 6	9. 5	4. 7	0. 8	1. 7
Middle Atlantic	742	0	. 8	9. 2	24. 8	24. 0	19. 5	9. 4	6. 1	3. 2	3. 0
East North Central	717	0	1. 8	13. 4	24. 4	28. 5	15. 5	9. 3	3. 8	1. 8	1. 5
West North Central	198	0	. 5	11. 0	18. 2	28. 3	25. 3	7. 6	6. 6	1. 0	1. 5
South Atlantic	261	0	1. 2	15. 7	31. 0	27. 2	12. 6	6. 1	4. 6	. 8	. 8
East South Central	426	. 5	7. 5	30. 1	28. 6	18. 6	8. 7	4. 2	1. 4	. 2	. 2
West South Central	91	0	2. 2	20. 9	34. 0	19. 8	12. 1	7. 7	1. 1	2. 2	0
Mountain	168	0	2. 4	10. 1	35. 7	27. 4	13. 1	7. 1	3. 0	1. 2	0
Pacific	688	. 2	. 7	6. 8	26. 6	26. 8	18. 1	10. 2	6. 0	2. 5	2. 1
Negro:											
Middle Atlantic	97	0	6. 2	21. 6	24. 7	15. 5	12. 4	7. 2	5. 2	4. 1	3. 1
South	311	1. 0	29. 9	37. 0	17. 4	9. 6	2. 2	1. 6	1. 0	. 3	0

[1] See footnote 1, table 3.

Since the purpose to which data are put determines which basis for classification is the more useful, the remainder of the report is confined to an analysis of records from families which were assigned to comparable expenditure groups by both methods of classification. Table

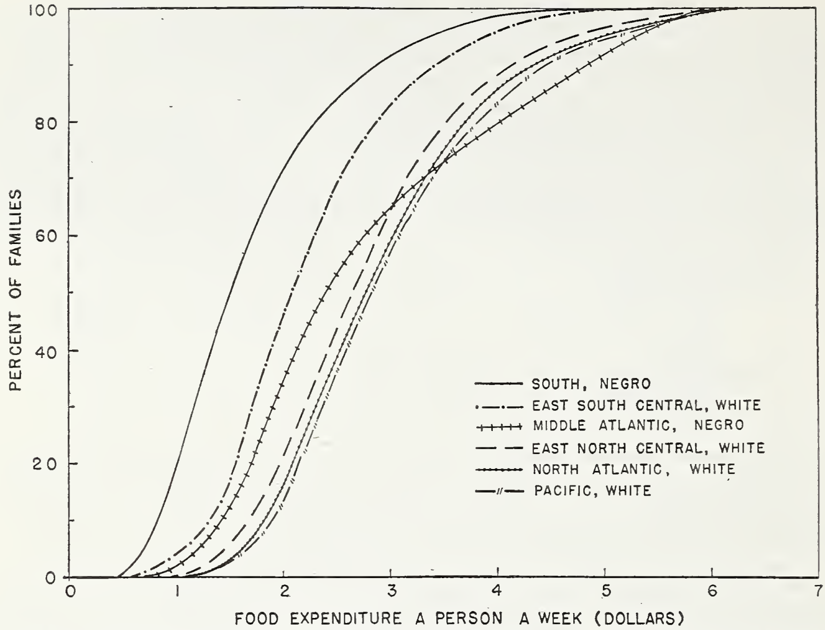

FIGURE 1.—Percentage of families in different regions whose food expenditures per person per week were any specified amount or less.

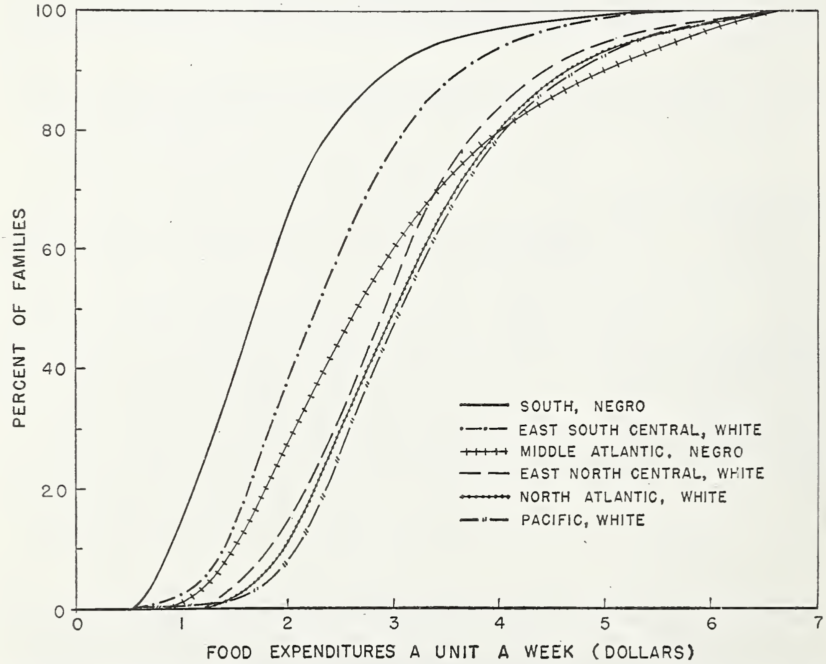

FIGURE 2.—Percentage of families in different regions whose food expenditures per food-expenditure unit per week were any specified amount or less.

9 shows the number from each region which fell in corresponding categories. The presence of zeros in this table does not mean that no records were found at these expenditure levels, but, because there were so few, averages were not obtained. Figures on consumption and nutritive value of diets based on these records are given in subsequent sections.

Table 9.—*Number of records analyzed in which weekly expenditures for food, per capita and per food-expenditure unit, were within specified amounts, by color of family, region, and season*

Color of family, region, and season	Records in which weekly food expenditure [1] per capita was found to be—								Total
	Under $0.63	$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37	$4.38 and over	
	and in which weekly food expenditure [1] per food-expenditure unit was found to be—								
	Under $0.67	$0.67–$1.32	$1.33–$1.99	$2.00–$2.66	$2.67–$3.32	$3.33–$3.99	$4.00–$4.66	$4.67 and over	
White:									
North Atlantic:	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Winter 1934–35	0	0	23	0	36	0	14	0	73
Spring 1935	0	0	33	73	74	48	16	9	253
Summer 1935	0	0	25	66	58	32	22	0	203
Fall 1935	0	0	25	59	49	27	0	0	160
Winter 1935–36	0	0	11	42	36	40	17	8	154
Total, all seasons	0	0	117	240	253	147	69	17	843
East North Central:									
Spring 1935	0	0	10	26	17	13	0	0	66
Summer 1935	0	0	9	16	14	0	0	0	39
Spring 1936	0	0	24	32	45	23	0	0	124
Summer 1936	0	0	13	16	18	9	10	0	66
Fall 1936	0	0	14	17	20	8	0	0	59
Winter 1936–37	0	0	0	12	15	0	0	0	27
Total, all seasons	0	0	70	119	129	53	10	0	381
West North Central:									
Spring 1936	0	0	16	17	26	23	0	0	82
Summer 1936	0	0	0	10	11	9	0	0	30
Total, 2 seasons	0	0	16	27	37	32	0	0	112
South Atlantic:									
Fall 1935	0	0	9	15	18	0	0	0	42
Spring 1936	0	0	11	19	16	10	0	0	56
Total, 2 seasons	0	0	20	34	34	10	0	0	98
East South Central:									
Spring 1935	0	7	35	21	10	0	0	0	73
Summer 1935	0	10	29	36	12	0	0	0	87
Fall 1935	0	0	26	25	17	0	0	0	68
Winter 1935–36	0	0	24	15	15	0	0	0	54
Total, all seasons	0	17	114	97	54	0	0	0	282
West South Central:									
Spring 1936	0	0	11	20	8	0	0	0	39
Mountain:									
Spring 1935	0	0	0	9	11	0	0	0	20
Summer 1935	0	0	10	23	14	9	0	0	56
Total, 2 seasons	0	0	10	32	25	9	0	0	76

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[1] See footnote 1, table 3.

TABLE 9.—*Number of records analyzed in which weekly expenditures for food, per capita and per food-expenditure unit, were within specified amounts, by color of family, region, and season*—Continued

Color of family, region, and season	Records in which weekly food expenditure per capita was found to be—								Total
	Under $0.63	$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37	$4.38 and over	
	and in which weekly food expenditure per food-expenditure unit was found to be—								
	Under $0.67	$0.67–$1.32	$1.33–$1.99	$2.00–$2.66	$2.67–$3.32	$3.33–$3.99	$4.00–$4.66	$4.67 and over	
White—Continued.	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Pacific:									
Spring 1935	0	0	0	16	29	12	8	9	74
Summer 1935	0	0	12	53	50	30	14	16	175
Fall 1935	0	0	0	34	23	23	0	0	80
Winter 1935–36	0	0	9	34	30	11	15	13	112
Total, all seasons	0	0	21	137	132	76	37	38	441
Negro:									
South:									
Spring 1935	0	22	23	13	0	0	0	0	58
Summer 1935	0	27	35	8	8	0	0	0	78
Fall 1935	0	35	25	16	10	0	0	0	86
Total, all seasons	0	84	83	37	18	0	0	0	222
Total white	0	17	379	706	672	327	116	55	2,272
Total Negro	0	84	83	37	18	0	0	0	222

QUANTITY OF FOOD

For families of employed wage earners and low-salaried workers living in cities in four regions, this section presents year-round figures on the average consumption of important articles or groups of foods. Averages are given for families classified both by level of food expenditure and by regional groups. This section also compares the consumption of families at one level of food expenditure and one season in cities of eight regions, and summarizes seasonal trends as reflected in the averages of four 3-month periods during a year. Finally this section makes six comparisons of average per-capita consumption of important groups of foods by families with and without children under 16 years of age.

CONSUMPTION IN FOUR REGIONS BY LEVEL OF FOOD EXPENDITURE

The quantities of different kinds of food which the city housewife selects to feed her family are greatly influenced by the amount of money she has to spend. When it is small, the problem most obvious to her is that of satisfying hunger, and in her selection she emphasizes foods with "staying" quality. With more leeway in spending, she gives greater prominence to the foods which add interest and variety to the diet but which tend to be more expensive in relation to the satisfaction of hunger.

In the case of the family groups reported here, higher expenditures for food meant increased purchases of nearly all kinds of food. Generally speaking, the increments were most pronounced in the case of milk, butter, cream, eggs, meat, fruits, and succulent vegetables, and least for grain products, sugars, and fats other than butter and cream. The increases, however, did not always proceed at the same rate throughout the entire range of expenditures. For some foods the rate of increases was fairly regular from one expenditure level to another. For some it was greatest at the lower end of the expenditure range, and for still others, at the upper end.

In tables 10 to 15 are presented the average per-capita quantities of foods purchased by families classified both by the amounts spent for food and by region. In these tables, the data refer only to the four regions from which the largest numbers of records were obtained. For each regional group averages by season were obtained, based on the entire number of records analyzed, both with and without regard to level of food expenditure. The year-round figures are simple averages of the seasonal figures shown in tables 61, 62, and 63. Each of the four seasons was represented at almost every level of food expenditure; at some, however, the number of records was too small to be averaged by season. Although records were obtained from southern Negro families only in three seasons, estimates of consumption in a year are included in the tables for the sake of racial comparisons.

Data on the consumption of and expenditure for 194 items of food are found in tables 64 and 65.

EGGS

The increase in purchase of eggs was fairly steady with increasing expenditures for all food throughout the entire expenditure range. Thus, as shown in table 10, the per-capita purchases in a year by North Atlantic families averaged 13, 19, 23, 28, and 36 dozen, respectively, at the five spending levels between $1.25 and $4.37 a person a week.

But at any given level of expenditure, the quantities purchased differ markedly from one part of the country to another. White families in East South Central cities tended to use more eggs than those in other parts of the country spending the same amounts for food. In fact they purchased about a third more eggs a person a year than families in North Atlantic cities at comparable food-spending levels. But since average food expenditures were lower in the South, the average per-capita egg consumption of the entire group of white families in the East South Central region was just about the same as the average for the North Atlantic region. It amounted to 22 dozen per person per year.

On the other hand, the purchases of eggs by Pacific families were not markedly high at any given level of expenditure, yet as a group, Pacific families consumed an average of 27 dozen eggs a person a year. This is higher than the average of any other group, and reflects to some extent higher-than-average expenditures for food.

The lowest of all of the egg-consumption figures were those for southern Negro families. Figures were low at each level of expenditure for food, and particularly low for the group as a whole. Their consumption of eggs averaged only slightly more than 10 dozen a person a year—a little less than half of the quantity used by other groups of families.

TABLE 10.—*Eggs and milk: Estimated per-capita consumption in a year, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Eggs	Milk, whole, skim, buttermilk	Milk, evaporated, condensed	Cheese	Cream, ice cream	Total fluid milk equivalent[2]
$0.63–$1.24:							
White:	*Number*	*Dozen*	*Quarts*	*Pounds*	*Pounds*	*Pounds*	*Quarts*
East South Central	17	15.7	35	21.2	0.6	0	57
Negro:							
South	84	8.1	16	7.4	1.6	.5	30
$1.25–$1.87:							
White:							
North Atlantic	117	13.3	94	15.4	4.7	1.5	123
East North Central	70	17.8	88	8.3	6.3	1.9	116
East South Central	114	17.8	74	23.5	4.1	.8	113
Pacific	21	12.9	89	19.5	4.8	11.3	126
Negro:							
South	83	11.1	36	13.5	1.8	.5	57
$1.88–$2.49:							
White:							
North Atlantic	240	18.6	111	11.4	7.3	3.3	146
East North Central	119	22.8	105	10.7	7.6	3.5	139
East South Central	97	26.2	106	18.3	5.3	1.6	144
Pacific	137	23.2	121	24.0	7.6	5.7	168
Negro:							
South	37	13.7	50	11.7	5.1	2.2	84
$2.50–$3.12:							
White:							
North Atlantic	253	23.2	132	15.6	8.5	5.4	176
East North Central	129	25.0	128	15.9	11.3	7.3	181
East South Central	54	30.6	183	17.6	6.3	2.1	227
Pacific	132	27.6	123	21.5	10.8	7.9	179
Negro:							
South	18	21.5	93	22.1	5.4	6.6	137
$3.13–$3.74:							
White:							
North Atlantic	147	27.9	136	15.3	8.6	10.1	181
East North Central	53	31.8	146	12.5	10.4	7.6	193
Pacific	76	30.0	149	23.3	13.2	16.8	218
$3.75–$4.37:							
White:							
North Atlantic	69	35.5	162	9.5	11.2	14.3	212
East North Central	10	43.7	96	21.5	11.2	11.5	152
Pacific	37	35.6	128	27.2	15.3	16.6	208
$4.38 and over:							
White:							
North Atlantic	17	42.0	182	14.0	7.6	9.2	220
Pacific	38	46.5	139	33.1	24.7	35.1	259
Total or average:							
White:							
North Atlantic	843	21.9	122	13.6	7.7	5.2	162
East North Central	[3] 276	23.4	109	13.1	8.9	4.9	144
East South Central	282	22.1	98	21.1	4.6	.9	138
Pacific	441	27.0	126	23.8	10.8	10.8	188
Negro:							
South	222	10.3	30	10.8	2.3	1.0	51

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[1] See footnote 1, table 3.

[2] The following are approximately equivalent to the food value of 1 quart of fluid whole milk: (1) 17 ounces of evaporated milk; (2) 1 quart of fluid skim milk and 1½ ounces of butter; (3) 5 ounces of American Cheddar cheese; (4) 4½ ounces of dry whole milk; (5) 3½ ounces of dry skim milk and 1½ ounces of butter.

[3] The averages for the East North Central region are based on data for 4 seasons in 1936–37 only and exclude 105 records obtained in the spring and summer of 1935. These 105 records are included, however, in the analysis by level of expenditure for food.

MILK

Fluid milk consumption, shown in table 10, increased markedly with rising expenditures for food, especially at the lower end of the food-expenditure range. With an allowance of $1.25–$1.87 a person a week for food, the average consumption of fluid milk by white families ranged from a high of 94 quarts a person a year in North Atlantic cities to a low of 74 quarts in East South Central cities. With food expenditures of $1.88–$2.49 weekly, the averages ranged from a high of 121 quarts in Pacific cities to a low of 105 quarts in the East North Central cities. When still more money was available for food, \$2.50–\$3.12 a person a week, averages ranged from a high of 183 quarts in East South Central cities to a low of 123 quarts a person a year in the Pacific cities.

In every region, families spending a small amount of money for food used only a small quantity of milk. In the South where average expenditures for food were lower than in the North and West, milk consumption also was lower. Average consumption by the entire group of white families in the South amounted to only 98 quarts a person a year as contrasted with averages from 109 to 126 quarts a person in other regions. Southern white families, however, bought as much milk as white families in other regions when their food expenditures were the same. A large share of the fluid milk used in the South is in the form of skim milk and buttermilk. Among white families about a fourth of the total and among Negroes more than half was in this form.

Pacific and East South Central families purchased somewhat more evaporated or condensed milk than did families in other regions. Since these foods are among the cheaper forms of milk, it might be expected that they would be featured in diets of lower cost. The figures in table 10 show, however, that the consumption of evaporated and condensed milk did not decline but was maintained at a fairly constant level with increasing expenditures for food.

In general, the purchase of cream and ice cream increased markedly as more money was spent for food. More of these foods were purchased by families in Pacific cities than by those in other regions. Most of the southern families were spending too little for food to buy any large amount of cream and ice cream. An average of only about 1 pint a person a year was bought by white families in the East South Central cities, and by the southern Negro group, as compared to 5 pints by families in the North, and 11 pints in the far West.

The quantities of fluid milk to which were equivalent the milk solids other than fat in various milk products are shown in the last column of table 10. The range in average consumption among white families was from an equivalent of 188 quarts a person a year in Pacific coast cities to 138 quarts in East South Central cities. For southern Negro families the average was equivalent to only 51 quarts a person a year.

FATS

With increasing expenditures for food there were steady increases in the quantity of total fats purchased, as shown in table 11. In the case of North Atlantic families the averages were 30, 36, 45, 48, and 54 pounds, respectively, for five spending levels between \$1.25 and \$4.37 a person a week.

With rising food expenditures there was a marked increase in the consumption of butter, but purchases of other table fats tended to decrease. For North Atlantic families at five spending levels, average butter purchases were 15, 19, 23, 26, and 32 pounds a person a year, while purchases of other table fats averaged 3.8, 1.1, 1.1, 0.8, and 0.5 pounds, respectively. North Atlantic families bought less of the latter than did families in other regions. Most white families bought only slightly more lard and other shortenings, and bacon, salt pork, and suet at high than at the low food-expenditure levels.

TABLE 11.—*Fats: Estimated per-capita consumption in a year, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Butter	Other table fats	Cooking or salad oils, dressings	Lard, other cooking fats	Bacon, salt pork, suet	Total fats
	Number	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
$0.63–$1.24:							
White:							
East South Central	17	4.6	5.8	2.5	27.6	13.0	54
Negro:							
South	84	4.3	2.7	.8	26.2	15.9	50
$1.25–$1.87:							
White:							
North Atlantic	117	14.6	3.8	3.6	5.0	2.7	30
East North Central	70	12.0	8.6	1.1	10.1	8.0	40
East South Central	114	6.9	7.0	5.6	23.6	13.4	56
Pacific	21	9.2	9.2	7.8	7.5	6.1	40
Negro:							
South	83	8.2	2.3	3.6	36.1	32.9	83
$1.88–$2.49:							
White:							
North Atlantic	240	18.7	1.1	5.0	7.4	3.8	36
East North Central	119	13.4	6.2	4.7	13.1	9.3	47
East South Central	97	9.1	7.7	6.1	28.6	16.8	68
Pacific	137	17.3	6.3	7.4	8.1	4.0	43
Negro:							
South	37	9.0	1.9	2.2	50.5	38.5	102
$2.50–$3.12:							
White:							
North Atlantic	253	23.3	1.1	6.8	8.8	5.1	45
East North Central	129	18.3	5.2	5.0	17.0	9.7	55
East South Central	54	12.8	5.8	9.3	27.1	18.9	74
Pacific	132	23.3	4.7	11.1	10.3	6.9	56
Negro:							
South	18	17.4	1.2	1.6	53.7	46.7	121
$3.13–$3.74:							
White:							
North Atlantic	147	25.7	.8	8.9	6.7	5.8	48
East North Central	53	23.8	5.9	4.6	15.4	12.9	63
Pacific	76	27.6	3.7	11.2	10.2	9.8	62
$3.75–$4.37:							
White:							
North Atlantic	69	31.6	.5	7.8	7.5	6.6	54
East North Central	10	39.8	0	3.0	27.6	11.9	82
Pacific	37	29.4	5.1	19.8	11.7	11.2	77
$4.38 and over:							
White:							
North Atlantic	17	33.1	0	26.5	8.3	5.1	73
Pacific	38	35.6	1.3	27.6	12.8	14.1	94
Total or average:							
White:							
North Atlantic	843	21.0	1.4	6.4	7.1	4.3	40
East North Central	[2] 276	15.3	5.5	4.0	14.1	10.0	49
East South Central	282	8.4	7.0	5.8	25.3	15.5	62
Pacific	441	22.1	5.2	10.4	9.7	6.8	54
Negro:							
South	222	6.6	2.6	1.9	33.6	25.3	70

[1] See footnote 1, table 3

[2] See footnote 3, table 10.

The kinds and quantities of fats purchased varied considerably from one part of the country to another. Butter was used most freely in the North Atlantic and Pacific cities and least in the South. The average per-capita consumption in a year by white families in the three regional groups was 21, 22, and 8 pounds, respectively. Pacific coast families used more cooking and salad oils than any other group of families studied. The yearly average for Pacific families was about 10 pounds; whereas for North Atlantic, East North Central, and East South Central families it was 6, 4, and 6 pounds, respectively. East South Central white families bought two to four times as much lard and salt pork as other white families.

The average consumption of all fats and fatty foods among families in North Atlantic cities, 40 pounds a person a year, was lower than elsewhere. The highest average for white families was 62 pounds a person, recorded in East South Central cities.

Fats are more important as food to the southern Negroes than to any other group. Not only did these families buy large quantities at every level of food expenditure, but they sharply increased their purchases as more money was available for food. Their purchases averaged 50, 83, 102, and 121 pounds a person a year at four spending levels falling between $0.63 and $3.12 per person weekly. Families spending $2.50–$3.12 for food a person a week purchased twice as much lard and cooking fats and three times as much bacon and salt pork as those spending $0.63–$1.24 a person in a week.

For the southern Negroes included in this study, purchases of all fats and fatty foods averaged 70 pounds a person a year. Of this 7 pounds were butter, 4 pounds other table fats or oils, 25 pounds bacon and salt pork, and 34 pounds lard and other cooking fats.

LEAN MEAT, POULTRY, FISH

Significant increases in the purchases of lean meat, poultry, and fish occurred regularly with increasing food expenditures, as shown in table 12. In North Atlantic cities, average purchases at five spending levels between $1.25 and $4.37 a person a week were, respectively, 87, 114, 157, 178, and 221 pounds a person a year. About this same level of consumption prevailed in the East North Central and Pacific cities when the same amounts of money went for food, but a lower level was characteristic of white families in East South Central cities. The consumption by southern white families as a group amounted to 83 pounds a person a year, as compared to averages ranging from 128 to 139 pounds a person for other regional groups.

The large purchases of meat, poultry, and fish by Negro families at each food-spending level did not raise their general average above that of white families in the North and West, since a large proportion of the Negro families were found at the lower end of the food-expenditure range. As a group, the southern Negro families bought 126 pounds of meat, poultry, and fish a person a year.

Regional differences were much more striking in respect to separate foods included in the meat, fish, and poultry class. Beef was the preferred meat in all regions. Average per-capita consumption ranged from about 36 pounds a year for southern white families to 58 pounds for Pacific families. Southern Negro families consumed about 34 pounds a person a year.

Mutton and lamb seem to be used to a greater extent in cities on the Pacific coast than elsewhere. The average consumption there was 16 pounds a person a year. The quantities purchased by families in the East Central cities were almost negligible.

The average purchase of pork, exclusive of bacon and salt pork, was about 23 pounds a person a year by white families in North Atlantic cities. Somewhat more than this was bought by those in East North Central cities but half or less than half as much by white families in East South Central and Pacific coast cities.

At each level of food expenditure Negro families consumed very much larger quantities of pork than did white families in any region studied. As a group their purchases averaged only about 22 pounds a year, since most of these families were spending only small amounts for food.

TABLE 12.—*Lean meat, poultry, and fish: Estimated per-capita consumption in a year, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Beef, veal	Mutton, lamb	Pork [2]	Miscellaneous meat products	Poultry	Fish, other sea food	Total meat, poultry, fish
$0.63–$1.24:								
White:	*Number*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
East South Central	17	24.4	0	5.8	7.2	0	13.0	50
Negro:								
South	84	28.9	.5	13.6	9.7	8.8	25.4	87
$1.25–$1.87:								
White:								
North Atlantic	117	40.4	5.9	14.4	8.5	4.4	13.2	87
East North Central	70	32.2	.6	13.9	23.4	4.4	5.9	80
East South Central	114	30.3	.6	12.8	9.4	5.4	9.3	68
Pacific	21	48.3	6.5	7.3	8.5	4.0	10.2	85
Negro:								
South	83	39.1	1.3	29.5	13.2	11.4	29.2	124
$1.88–$2.49:								
White:								
North Atlantic	240	48.4	5.5	21.3	10.5	11.0	17.9	114
East North Central	119	42.2	1.1	24.0	34.8	4.8	7.1	114
East South Central	97	41.3	.8	18.4	10.5	14.0	10.9	96
Pacific	137	48.6	10.2	9.3	10.0	6.7	15.9	101
Negro:								
South	37	43.8	0	48.0	23.7	22.1	52.7	190
$2.50–$3.12:								
White:								
North Atlantic	253	64.0	11.9	30.0	11.8	16.4	22.5	157
East North Central	129	53.0	1.1	30.5	36.3	13.4	11.8	146
East South Central	54	43.5	3.1	27.4	8.8	18.4	16.8	118
Pacific	132	62.9	18.2	12.5	11.2	10.9	19.8	135
Negro:								
South	18	64.4	2.8	55.0	20.1	41.4	34.2	218
$3.13–$3.74:								
White:								
North Atlantic	147	61.4	18.9	33.0	10.7	25.9	28.0	178
East North Central	53	65.4	.2	44.8	41.4	18.7	9.9	180
Pacific	76	65.0	21.7	13.6	10.5	13.5	25.8	150
$3.75–$4.37:								
White:								
North Atlantic	69	75.2	25.5	48.2	13.8	27.7	30.6	221
East North Central	10	85.9	0	64.9	60.8	24.3	34.3	270
Pacific	37	81.0	28.2	23.9	14.6	27.6	20.6	196
$4.38 and over:								
White:								
North Atlantic	17	86.5	27.8	48.6	13.4	43.1	27.2	246
Pacific	38	97.1	41.3	30.1	18.5	30.8	32.1	250
Total or average:								
White:								
North Atlantic	843	54.0	11.3	22.8	13.9	16.2	20.9	139
East North Central	[3] 276	45.1	.3	29.3	38.1	10.4	8.8	132
East South Central	282	35.5	.9	11.9	14.1	9.4	11.0	83
Pacific	441	58.4	15.9	9.7	12.7	12.3	19.1	128
Negro:								
South	222	34.2	.7	21.9	16.1	12.9	40.2	126

[1] See footnote 1, table 3.

[2] Exclusive of salt pork and bacon.

[3] See footnote 3, table 10.

The term "Miscellaneous meat products," as used in this report, includes liver and other organs, frankfurters, bologna and other sausage, and mixtures sometimes called "lunch meats." Since pork products figure prominently among these mixtures, the actual pork consumption, if known, would be higher than the figures in table 12 indicate, particularly in the case of East North Central white, and southern Negro families. The average consumption of liver by white families was estimated to be about 2 pounds a person a year and about 3 pounds for Negro families, as shown in table 64.

The total consumption of miscellaneous meat products did not increase much with rising expenditures for food except in the case of East North Central families. Their average purchases a person a year ranged from 23 to 61 pounds between the lowest and highest food-spending levels.

Poultry is popular in the Southeast and families in this region buy more than other groups spending the same amount for food. White families purchased 5, 14, and 18 pounds a person a year, at three food spending levels between $1.25 and $3.12 a person a week. These quantities were greater than those purchased by white families in comparable food-spending classes in other regions. The average consumption of poultry a person a year by white families in different regional groups was:

	Pounds
North Atlantic	16
East North Central	10
East South Central	9
Pacific	12

With as little as from $0.63–$1.24 to spend for food a person a week, Negro families purchased about 9 pounds of poultry a person a year, and the average for Negro families at all spending levels was about 13 pounds a person a year.

The average consumption of fish and other sea food among white families was highest in the North Atlantic and Pacific cities. With increasing levels of expenditure in these two regions average yearly per-capita quantities increased two to three times. Their average purchases of 21 and 19 pounds a person a year comprised about 15 percent of their total quantity of meat, poultry, and fish. The lowest consumption was found in the East North Central cities, where only in the diets of the highest food-expenditure group did consumption exceed 12 pounds a person a year. Among southern Negro families the average consumption of fish and sea food increased from 25 to 34 pounds a person a year with rising expenditures for food. At one intervening level of expenditure the average was 53 pounds, due to the consumption of unusually large quantities of oysters by one family.

SUGARS

As more money was available for food, the consumption of commercial sugar increased steadily in all regions studied, as shown in table 13. In North Atlantic cities the average quantities purchased in a year at each of five spending levels between $1.25 and $4.37 a person a week were 46, 52, 59, 63, and 72 pounds for each person. White families in southern cities used more sugar than those in other regions spending the same amounts for food, but regional differences tend to disappear when the average consumption figures of each group as a whole are compared. The average per-capita purchases in a year by white families were as follows:

	Pounds
North Atlantic cities	56
East North Central cities	49
East South Central cities	58
Pacific cities	64

Southern Negroes bought greatly increasing quantities of sugar with rising expenditures for food. At four spending levels between $0.63 and $3.12 a person a week, the averages were 41, 56, 74, and 91 pounds a person a year. For all of the Negro families the average consumption, however, was only 52 pounds a person a year.

TABLE 13.—*Sugars and grain products: Estimated per-capita consumption in a year, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Sugars	Jellies, jams, sirups, candies	Bread, rolls	Other baked goods	Flours, meals	Ready-to-eat cereals	Other cereal products	Total flour equivalent [2]
$0.63–$1.24:									
White:	*Number*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
East South Central	17	38.4	16.6	34	4.8	122	2.0	23.8	173
Negro:									
South	84	40.7	11.4	22	2.0	121	.1	23.4	161
$1.25–$1.87:									
White:									
North Atlantic	117	46.0	5.2	116	16.0	26	4.3	26.0	145
East North Central	70	33.6	10.0	100	26.5	44	6.4	13.6	149
East South Central	114	52.2	19.1	58	8.4	109	3.8	14.3	172
Pacific	21	34.9	12.4	93	18.4	25	5.5	19.0	124
Negro:									
South	83	55.8	14.3	28	1.9	154	.4	34.9	209
$1.88–$2.49:									
White:									
North Atlantic	240	52.3	8.5	121	26.2	29	5.7	21.0	155
East North Central	119	49.7	8.5	108	35.8	43	6.5	16.4	162
East South Central	97	64.1	19.5	69	15.9	102	4.3	16.5	180
Pacific	137	53.4	8.9	99	19.5	42	6.2	18.5	146
Negro:									
South	37	74.1	22.0	28	10.5	208	1.3	38.4	274
$2.50–$3.12:									
White:									
North Atlantic	253	59.2	8.1	128	35.1	32	6.3	22.2	169
East North Central	129	61.2	17.4	127	44.7	42	6.3	16.9	180
East South Central	54	70.0	20.4	74	23.2	96	6.4	16.4	184
Pacific	132	62.3	15.7	102	28.1	46	7.2	24.2	164
Negro:									
South	18	90.8	16.1	62	10.9	206	2.4	37.8	295
$3.13–$3.74:									
White:									
North Atlantic	147	63.0	8.9	139	46.9	26	5.8	23.4	180
East North Central	53	81.6	19.4	132	51.7	54	9.6	20.0	207
Pacific	76	74.6	21.4	116	35.4	52	6.2	25.4	185
$3.75–$4.37:									
White:									
North Atlantic	69	71.8	10.8	145	45.0	35	9.0	24.4	196
East North Central	10	69.5	10.0	168	55.8	44	5.2	14.7	214
Pacific	37	66.5	22.9	123	52.2	34	8.4	21.0	181
$4.38 and over:									
White:									
North Atlantic	17	68.8	13.8	125	63.6	47	8.0	33.8	202
Pacific	38	108.8	26.4	142	65.9	50	4.0	33.1	227
Total or average:									
White:									
North Atlantic	843	55.7	7.8	129	31.2	29	5.7	22.4	164
East North Central	[3] 276	49.0	13.4	117	39.2	44	6.8	15.8	170
East South Central	282	57.7	19.4	62	12.7	105	4.3	15.2	175
Pacific	441	63.5	15.5	105	27.5	44	6.4	21.2	160
Negro:									
South	222	52.3	13.9	26	3.1	148	.4	28.6	196

[1] See footnote 1, table 3.
[2] Two-thirds of the weight of baked goods has been added to the weight of flour, meals, and other cereals.
[3] See footnote 3, table 10.

The consumption of jellies, jams, sirups, and candies was variable. In general, more was bought at higher than at lower food-expenditure levels. These items constituted about a fourth of the total quantity of sugars and sweets in the diets of East South Central white families; about a fifth in the case of East North Central and Pacific white families, and of southern Negroes; but only about one-eighth of the total in North Atlantic diets.

The consumption of the various sirups was small, yet differences in the kinds most commonly used in different parts of the country were clearly indicated. Cane sirup was used in greatest quantity in the Southeast; in fact little or none was reported in other regions. Honey was more popular in the Pacific region than elsewhere.

Corn sirup and molasses were more popular among Negro than other families. Their average consumption of corn sirup was over 7 pounds a person a year, and of molasses and other sirups, less than 4 pounds. The low consumption of molasses indicates that the traditional "meal and molasses" was not characteristic of Negro diets in these cities at least.

GRAIN PRODUCTS

Of grain products as a class the purchases by white families increased but slightly between low and high levels of expenditure for food. Table 13 presents averages for five subclasses both by level of food expenditure and by regional groups, while table 14 gives averages for certain kinds of products for regional groups only. Consumption was somewhat higher in the South and lower on the Pacific coast than elsewhere. The average per-capita purchases for the year were 164, 170, 175, and 160 pounds for North Atlantic, East North Central, East South Central, and Pacific white families, respectively. These figures refer to flour, meals, cereals, and the flour equivalent (about two-thirds of the weight) of baked goods.

TABLE 14.—*Selected grain products: Estimated per-capita consumption in a year, by color of family and region, December 1934–February 1937*

Color of family and region	Records	Bread			Wheat flour	Corn meal	Macaroni and other pastes	Wheat cereals	Oat cereals	Hominy	Rice
		Rye	Whole wheat	White and other							
	Number	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
White:											
North Atlantic	843	13.3	3.5	97.4	26.2	0.8	12.0	1.8	4.1	(1)	3.5
East North Central	276	8.0	3.3	91.6	(2)	3.6	7.0	(2)	(2)	(2)	2.7
East South Central	282	1.4	3.2	53.6	74.3	30.2	3.3	.4	3.5	3.5	4.2
Pacific	441	4.7	17.6	73.7	37.9	2.1	7.4	3.0	5.5	.2	2.7
Negro:											
South	222	(1)	.1	22.8	93.7	53.8	2.7	.1	2.2	8.4	15.1

[1] Less than 0.1 pound.

[2] Not computed.

More characteristic than regional differences in the quantities were the differences in the form in which grain products were bought. North Atlantic and East North Central families bought much more of their grain products in the form of bread and other ready-baked goods, than families in other parts of the country. The average quantities purchased increased with level of food expenditure. Among North Atlantic families, for example, average purchases of bread and rolls ranged from 116 pounds a person a year for those spending $1.25–$1.87 a person a week to 145 pounds for those spending $3.75–$4.37. These quantities were somewhat higher than the purchases of corresponding Pacific coast families, and nearly twice as high as those of southern white families spending the same amounts for food.

Most of the bread purchased was made of white flour, as is shown in table 14. In Pacific cities about a fifth of the total was dark bread (rye or whole wheat), as compared with a tenth in East North Central cities. The consumption of rye bread was highest among North Atlantic families with an average of about 13 pounds a person a year. Whole-wheat bread was most popular in Pacific cities, where families recorded an average of about 18 pounds a person a year.

With rising expenditures for food, increases in the purchases of ready-baked cakes, pies, and cookies were proportionately larger than of bread. Purchase of such baked foods was more prevalent in the North and West than in the South.

Of flours and meals, striking regional differences in consumption are seen. White families in southern cities purchased an average of 105 pounds of flours and meals, of which 30 pounds were corn meal, about 1 pound prepared flour, and 74 pounds white flour. In contrast to these high figures, East North Central and Pacific families reported an average of 44 pounds of flour and meal a person during the year, and North Atlantic families, only 29 pounds a person.

In the North and West, the quantities of flour and meal purchased did not vary greatly from one level of food expenditure to another. In the South, however, as more money was available, white families decreased somewhat their high purchases of these foods. The data suggest that when they felt they could afford it, they chose to buy somewhat more of their baked goods ready prepared and somewhat less in the form of flour and meal.

Ready-to-eat cereals constituted less than 4 percent of the total purchases of grain products. Averages for the various regional groups of white families were between 4 and 7 pounds a person a year.

Much greater quantities of uncooked cereal products were bought by all groups. The averages a person a year for different regional groups were:

	Pounds
North Atlantic	22
East North Central	16
East South Central	15
Pacific	21

Of these totals about half consisted of macaroni and other pastes in the case of families in northern cities, about one-fifth in the Southeast, and about one-third on the Pacific coast. Among white families the most important uncooked cereals were rice and oats in the North, oat and wheat cereals in the West, and rice, oat cereals, and hominy in the South.

Grain products play a very important part in diets of southern Negro families. At four food-spending levels between $0.63 and $3.12 a person a week, their average purchases were, respectively, 161, 209, 274, and 295 pounds a person a year. Of the group average of 148 pounds of flour and meal a person a year, about a third was corn meal and two-thirds white flour. Little ready-baked bread was purchased, averaging only 26 pounds a person a year. Purchases of ready-to-eat cereals averaged less than half a pound. On the other hand, as much as 29 pounds of uncooked cereal products a person a year were bought. Nearly half of this, 15 pounds, was polished rice, and almost a third, 8 pounds, was hominy. Small quantities of oat cereals and of macaroni and other pastes were bought, but almost no wheat cereals.

VEGETABLES

From the standpoint of quantity consumed, potatoes were the most important single item in the fruit and vegetable class. As shown in table 15, purchases of potatoes and sweetpotatoes increased steadily with rising food expenditures. At five spending levels the purchases of North Atlantic families averaged 133, 150, 170, 178, and 181 pounds, respectively, a person a year. More potatoes were eaten by families in North Atlantic cities than in other regions studied. Their consumption averaged 157 pounds a person a year. Corresponding figures for East North Central and Pacific families were 138 and 139 pounds, for East South Central white families, 100 pounds, and for southern Negro families, 91 pounds a person a year.

TABLE 15.—*Vegetables and fruits: Estimated per-capita consumption in a year, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Potatoes, sweetpotatoes	Mature beans and peas, cooked or canned	Dried vegetables, nuts	Leafy, green, and yellow vegetables	Tomatoes	Other vegetables	Citrus fruits	Dried fruits	Other fruits
$0.63–$1.24:										
White:	*No.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
East South Central	17	70	1.6	6.8	87.0	22.8	46.8	3.0	0.6	51
Negro:										
South	84	78	2.5	15.6	67.4	9.4	20.3	2.9	.9	31
$1.25–$1.87:										
White:										
North Atlantic	117	133	5.6	8.1	46.8	19.0	28.7	16.5	3.0	50
East North Central	70	131	4.2	9.6	44.3	24.5	30.0	22.1	3.2	61
East South Central	114	94	4.8	17.8	68.3	36.4	38.8	16.6	3.6	77
Pacific	21	98	6.8	8.5	68.3	56.5	68.1	54.0	5.4	130
Negro:										
South	83	97	1.3	18.6	106.5	17.1	33.5	6.8	2.7	63
$1.88–$2.49:										
White:										
North Atlantic	240	150	6.8	6.8	60.1	25.4	39.9	33.8	3.9	86
East North Central	119	138	7.7	13.4	55.8	20.0	48.8	34.9	3.5	99
East South Central	97	111	4.2	17.1	86.8	45.5	48.3	34.2	4.0	101
Pacific	137	117	3.9	9.0	100.1	39.0	54.4	68.6	8.2	154
Negro:										
South	37	120	.5	14.0	109.5	19.1	47.4	9.9	2.8	82
$2.50–$3.12:										
White:										
North Atlantic	253	170	9.1	8.7	82.9	33.9	55.9	51.1	5.6	105
East North Central	129	165	9.3	15.0	70.7	32.2	61.0	49.4	6.7	135
East South Central	54	110	5.8	16.1	112.9	44.6	54.1	50.6	6.9	142
Pacific	132	151	5.2	12.7	115.3	39.2	71.9	92.8	9.9	163
Negro:										
South	18	128	3.5	8.9	174.1	40.7	59.9	9.7	4.4	198
$3.13–$3.74:										
White:										
North Atlantic	147	178	8.0	9.3	92.0	37.8	79.6	66.4	7.1	138
East North Central	53	166	7.8	9.5	69.8	24.8	49.0	60.8	5.5	166
Pacific	76	172	6.1	10.3	146.7	46.3	87.8	101.7	14.0	218
$3.75–$4.37:										
White:										
North Atlantic	69	181	5.9	7.9	130.1	38.4	71.9	90.4	11.7	162
East North Central	10	238	0	5.5	137.2	54.4	115.1	54.8	14.8	96
Pacific	37	120	1.0	13.7	179.1	51.3	106.6	120.2	5.6	230
$4.38 and over:										
White:										
North Atlantic	17	162	4.0	10.2	118.0	36.4	49.9	89.1	2.3	193
Pacific	38	153	9.9	10.1	247.0	58.7	148.5	151.2	15.3	284
Total or average:										
White:										
North Atlantic	843	157	7.7	7.6	73.6	27.6	53.0	43.4	5.0	99
East North Central	[2] 276	138	7.2	11.2	59.6	24.3	53.8	39.2	4.1	99
East South Central	282	100	4.8	14.8	80.7	38.3	48.6	26.4	4.0	89
Pacific	441	139	4.3	11.0	121.7	41.1	78.0	86.1	9.1	180
Negro:										
South	222	91	1.8	16.2	90.6	14.1	30.5	5.5	1.8	54

[1] See footnote 1, table 3.

[2] See footnote 3, table 10.

In the North and West, potatoes were used chiefly, but sweetpotatoes were prominent in the southern dietary. North Atlantic families averaged 153 pounds of potatoes to 4 pounds of sweetpotatoes a person a year. The figures were 132 to 6, in the case of East North Central families, and 134 to 5, for Pacific families. East South Central white families bought about three times as many potatoes as sweetpotatoes, 78 and 22 pounds, respectively, a person a year. Southern Negro families bought almost equal quantities—49 and 42 pounds a person a year.

The consumption of dried peas, beans, and nuts varied from one expenditure level to another and the figures show no consistent regional differences.

Leafy, green, and yellow vegetables as a group are important foods because of their mineral and vitamin content. The quantities purchased by families in all regions increased markedly as food expenditure increased. Among white families those in Pacific cities consumed the largest quantities, then those in East South Central, North Atlantic, and East North Central cities in the order named. The average consumption of these four regional groups was 122, 81, 74, and 60 pounds a person a year, respectively. At all but one spending level, Negro families purchased the largest quantities of these foods. Even though most of the Negro families were found at the two lowest expenditure levels, the average consumption of the entire group was about 91 pounds a year per person.

Because of their importance as a source of vitamin C, tomatoes are considered separately. In general, the consumption in various forms (fresh, canned, juice, sauces) tended to increase as food expenditures increased, but the figures are not consistent for all regions. Among white families the averages for a person in a year by regions were:

	Pounds
North Atlantic	28
East North Central	24
East South Central	38
Pacific	41

For Negro families in the South the average a person a year was only 14 pounds. Over half of the totals just given consisted of fresh tomatoes. The remainder was in the form of canned tomatoes, juice, tomato paste, or sauce.

The food group designated in table 15 as "other vegetables" comprises all kinds of fresh and canned vegetables not included in the preceding categories. By far the highest consumption of these foods, an average of 78 pounds a person a year, was found among Pacific families. Families in North Atlantic, East North Central, and East South Central cities purchased about the same quantities during the year—53, 54, and 49 pounds per person, respectively. Southern Negro families bought an average of only about 30 pounds a person.

The estimated per-capita consumption of some specified fresh vegetables is shown in table 16. Fresh snap beans, lima beans, and corn were purchased in greater quantity by East South Central families than by other groups. Cabbage and onions were rather generally used in all regions. The range in average consumption of cabbage by white families in different regions was from 10 to 15 pounds, and of onions 10 to 17 pounds a person a year. Negro families purchased in the year about 24 pounds of cabbage and 7 pounds of onions a person.

TABLE 16.—*Selected fresh vegetables: Estimated per-capita consumption in a year, by color of family and region, December 1934–February 1937*

Color of family and region	Records	Beans, snap	Beans, lima (in pods)	Cabbage	Carrots	Corn (on cob)	Lettuce	Onions	Peas (in pods)	Spinach	Other greens	Tomatoes
White:	*No.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
North Atlantic	843	6.2	0.5	14.8	11.7	5.9	8.9	14.4	3.3	4.9	1.3	15.3
East North Central	276	4.1	.2	12.9	6.4	1.8	9.6	14.8	1.4	2.6	.6	9.2
East South Central	282	13.6	5.7	12.0	3.6	15.6	4.8	10.1	7.4	3.9	11.1	28.2
Pacific	441	8.4	.1	10.2	23.0	8.1	24.9	17.3	12.0	7.5	1.2	27.5
Negro:												
South	222	10.0	4.3	24.3	.3	11.8	.7	6.8	3.5	.5	24.5	9.5

Outstanding is the high consumption of carrots and lettuce by Pacific families. Their diets included 23 and 25 pounds a person a year, or nearly half a pound of each for every person weekly. More spinach was consumed on the Pacific coast than elsewhere. Average purchases of white families ranged from 8 pounds a person a year in Pacific cities to 3 pounds in East North Central cities. Average consumption of other greens was less than a pound a person a year in East North Central cities, but as much as 11 pounds among white families and 25 pounds a person a year among Negro families in the Southeast.

As shown in table 17, canned vegetables, particularly corn and tomatoes, were used more commonly by East North Central families than others included in this comparison.

TABLE 17.—*Selected canned vegetables: Estimated per-capita consumption in a year, by color of family and region, December 1934–February 1937*

Color of family and region	Records	Beans, snap	Corn	Peas	Sauerkraut	Tomatoes
White:	*Number*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
North Atlantic	843	1.8	4.4	6.6	3.2	8.9
East North Central	276	5.5	8.6	6.4	3.5	10.5
East South Central	282	1.4	4.3	3.4	2.4	7.6
Pacific	441	4.1	5.5	6.4	2.3	6.3
Negro:						
South	222	.1	1.6	1.2	.4	3.1

FRUITS

The consumption of citrus fruits shown in table 15, increased steadily as more money was spent for food. Families in Pacific cities consumed more than other groups studied at every level of food expenditure. Their purchases averaged 54, 69, 93, 102, and 120 pounds a person a year, at five spending levels between $1.25 and $4.37 a person weekly. At the same expenditure levels North Atlantic families bought averages of 16, 34, 51, 66, and 90 pounds. The purchases of East North Central and East South Central families were similar to those of North Atlantic families at comparable food-expenditure levels. Southern Negro families used very little citrus fruits. Average consumption did not exceed 10 pounds a person a year for any food-spending group.

Average consumption of citrus fruits by regional groups was as follows:

	Pounds
White families:	
North Atlantic	43
East North Central	39
East South Central	26
Pacific	86
Negro families:	
South	6

Of these totals about two-thirds were oranges—except in diets of southern Negroes in which oranges made up only about a third of the total. In the North and West, fresh grapefruit was the next most important item in this group. In the South, however, more lemons, limes, and tangerines than grapefruit were purchased.

Of fruits other than citrus and dried fruits, families in Pacific cities used the largest quantities, with averages of 130, 154, 163, 218, and 230 pounds a person a year at each of five spending levels. The average for all families was 180 pounds, as compared to 99, 99, and 89 pounds, respectively, for North Atlantic, East North Central, and East South Central white families, and 54 pounds for southern Negro families.

Apples and bananas head the list in respect to quantities consumed, as shown in table 18. North Atlantic families bought 35 and 25 pounds a person a year of the two fruits, and East South Central white families, somewhat smaller quantities. Apples were used most abundantly in Pacific coast and East North Central cities. Few apples or bananas were used by southern Negroes. Their average purchases of each of the two kinds of fruit were 5 pounds or less a person a year. Not so with watermelons, however. Over 30 pounds a person were purchased during the summer season.

TABLE 18.—*Selected fresh fruits: Estimated per-capita consumption in a year, by color of family and region, December 1934–February 1937*

Color of family and region	Records	Apples	Bananas	Grapefruit	Grapes	Oranges	Peaches	Strawberries	Watermelons
White:	*Number*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
North Atlantic	843	35	25	7.8	2.4	31	3.7	3.5	3.9
East North Central	276	37	27	8.8	3.2	26	1.2	5.6	.3
East South Central	282	22	22	4.1	1.9	16	2.6	2.7	20.7
Pacific	441	48	18	18.0	6.0	57	17.8	8.8	13.9
Negro:									
South	222	5	3	.8	1.9	2	4.0	1.5	30.8

Purchases of dried fruits were comparatively small. Averages ranged from a low of less than a pound a person a year, in the diets of southern families spending $0.63–$1.24 a person a week, to a high value of 15 pounds a year in diets of East North Central families spending $3.75–$4.37 a person a week for food and of Pacific coast families spending $4.38 or more. In each region, there were relatively large increases with rising expenditure for food. The average purchased by Pacific families was 9 pounds a person a year; for white families in other regions it amounted to 4 or 5 pounds, and for southern Negro families, to about 2 pounds a person a year.

SUMMARY OF QUANTITY

Figure 3 summarizes for five regional groups the consumption of seven important articles or groups of foods, by level of expenditure for food. The rate of increase with rising food expenditure can be seen region by region, as well as differences in the general level of consumption of each food from one region to another.

CONSUMPTION IN EIGHT REGIONS IN ONE SEASON AND AT ONE FOOD-EXPENDITURE LEVEL

As pointed out at the beginning of this section, the discussion of consumption thus far has referred to data from the four regions in which records were obtained at each of four seasons.

Some idea of the way in which the food habits of families in West North Central, South Atlantic, West South Central, and Mountain cities compare with those in the other four regions may be obtained from table 19. This table shows average per-capita consumption of specific foods during the months of March, April, and May, the only season for which records were obtained from all eight regions. Data are given for the most usual spending level, that at which the weekly food expenditures were between $1.88 and $2.49 per person. Additional information by season and level of expenditure appears in tables 61–63.

In general, the food purchases of families in West North Central cities were much like those in East North Central cities. The higher consumption of milk, apparent in the figures of table 19, was not found at other levels of food expenditure or in different seasons. Butter consumption, however, was consistently higher among the former and the consumption of grain products, flours and meals in particular, lower. Some of the other differences which may appear to be regional are in reality the result of having a small number of cases in a few groups.

The food habits of families living in South Atlantic cities resemble those of families in East South Central cities. At a given food-spending level purchases of eggs, fats, and grain products were comparatively high in both regions. The average consumption of white flour was 20 pounds a person in South Atlantic cities and 21 pounds in East South Central cities. The consumption of corn meal averaged 7 pounds in both regions. Purchases of ready-baked goods were small. Other points of similarity between diets of the two regions were the small quantities of citrus fruits and the large quantities of leafy, green, and yellow vegetables.

The food consumption of families living in two West South Central cities, Dallas and Houston, reflects some of the food habits of the Southeast, but in other respects resembles more closely those found in the North and West. For example, the consumption of fats was fairly high, as in the South; but the purchases of flour and meal, and ready-baked foods compared more closely with those in northern cities.

The averages representing the Mountain region were based on only nine family food records, too small a number from which to draw conclusions. In general, however, the figures fall in line with averages from other regions and show a great similarity to those from

Pacific cities. The higher consumption of milk is probably a real difference, since it was also found at other expenditure levels, and in other seasons, as shown in table 61. On the other hand these families living in Reno and Salt Lake City bought less of grain products than Pacific families spending the same amounts for food. The average consumption of fruit, and of leafy, green, and yellow vegetables was comparatively high in these diets, much as it was in diets of Pacific coast families.

TABLE 19.—*Estimated per-capita consumption of specified foods or groups of foods in March, April, May 1935 or 1936, by families in 8 regions, spending $1.88–$2.49 weekly per capita for food*

Item	Average per-capita consumption in—							
	North Atlantic cities by 73 families	East North Central cities by 32 families	West North Central cities by 17 families	South Atlantic cities by 19 families	East South Central cities by 21 families	West South Central cities by 20 families	Mountain cities by 9 families	Pacific cities by 16 families
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Eggs	8.0	7.4	8.9	12.8	12.1	11.5	11.5	9.5
Milk, whole, skim, buttermilk	58.3	51.7	74.7	43.0	48.6	62.9	91.2	54.8
Milk, evaporated, condensed	2.5	3.6	4.8	6.3	5.8	3.5	4.3	7.2
Cheese	1.6	1.7	1.7	1.6	1.0	1.6	.4	.9
Cream, ice cream	1.0	1.2	1.5	1.7	.8	.9	.8	.8
Total fluid milk equivalent [1]	75.3	70.7	96.8	67.8	71.5	81.8	102.9	76.2
Butter	4.8	3.9	5.3	3.0	1.6	2.0	5.2	3.8
Other table fats	.5	1.6	0	1.8	2.4	1.8	0	2.9
Cooking or salad oils, dressings	.8	1.0	.9	1.1	1.0	1.7	.8	2.1
Lard, other cooking fats	2.0	3.3	1.9	5.6	10.3	4.8	1.8	1.9
Bacon, salt pork, suet	1.2	1.6	1.6	4.6	3.5	3.4	.9	.5
Total	9.2	11.3	10.0	16.1	18.6	13.8	8.7	11.2
Beef, veal	11.0	11.1	10.2	11.4	12.2	10.6	11.9	11.9
Mutton, lamb	1.1	.2	.1	.7	0	.9	3.6	2.1
Pork (exclusive of bacon and salt pork)	5.6	4.8	4.2	7.5	3.9	3.8	5.0	3.5
Miscellaneous meat products	2.5	7.1	6.4	3.6	3.0	7.1	2.3	2.3
Poultry	1.9	.3	1.6	2.1	1.2	.7	0	2.1
Fish, other sea food	5.2	1.2	3.2	12.0	2.0	1.4	.8	6.4
Total	27.3	24.7	25.8	37.5	22.3	24.5	23.5	28.2
Sugars	13.9	11.6	11.7	13.2	15.7	11.6	12.0	12.4
Jellies, jams, sirups, candies	3.2	2.5	2.1	3.1	3.4	3.6	2.0	1.4
Bread, rolls	26.7	25.4	25.6	20.5	18.3	28.9	20.2	25.1
Other baked goods	7.0	7.0	4.8	4.4	5.0	4.9	2.5	4.8
Flours, meals	6.9	14.9	9.1	27.3	29.0	9.5	8.6	14.1
Ready-to-eat cereals	1.7	2.4	1.6	2.0	.9	2.6	1.1	1.8
Other cereal products	4.3	3.6	3.0	2.8	5.2	3.6	4.3	4.5
Total flour equivalent [2]	35.4	42.6	34.0	48.8	50.6	38.4	29.2	40.4
Potatoes, sweetpotatoes	42.4	34.8	39.3	24.6	29.3	21.9	37.5	29.4
Mature beans and peas, cooked or canned	1.7	1.4	1.6	3.3	.8	2.2	.4	.5
Dried vegetables, nuts	2.1	3.4	1.7	2.3	4.2	3.8	1.1	1.6
Leafy, green, and yellow vegetables	14.9	12.7	21.6	25.4	20.8	19.0	28.6	30.6
Tomatoes	3.9	3.5	4.1	6.4	8.7	7.0	7.9	9.6
Other vegetables	6.7	14.0	7.7	8.8	10.3	19.9	8.6	6.5
Citrus fruits	11.2	13.7	11.9	4.5	7.1	3.0	25.4	27.1
Dried fruits	.9	.8	1.4	.8	.9	1.5	1.3	1.5
Other fruits	20.1	22.7	26.4	19.6	16.3	17.8	24.8	25.9

[1] See footnote 2, table 10.

[2] See footnote 2, table 13.

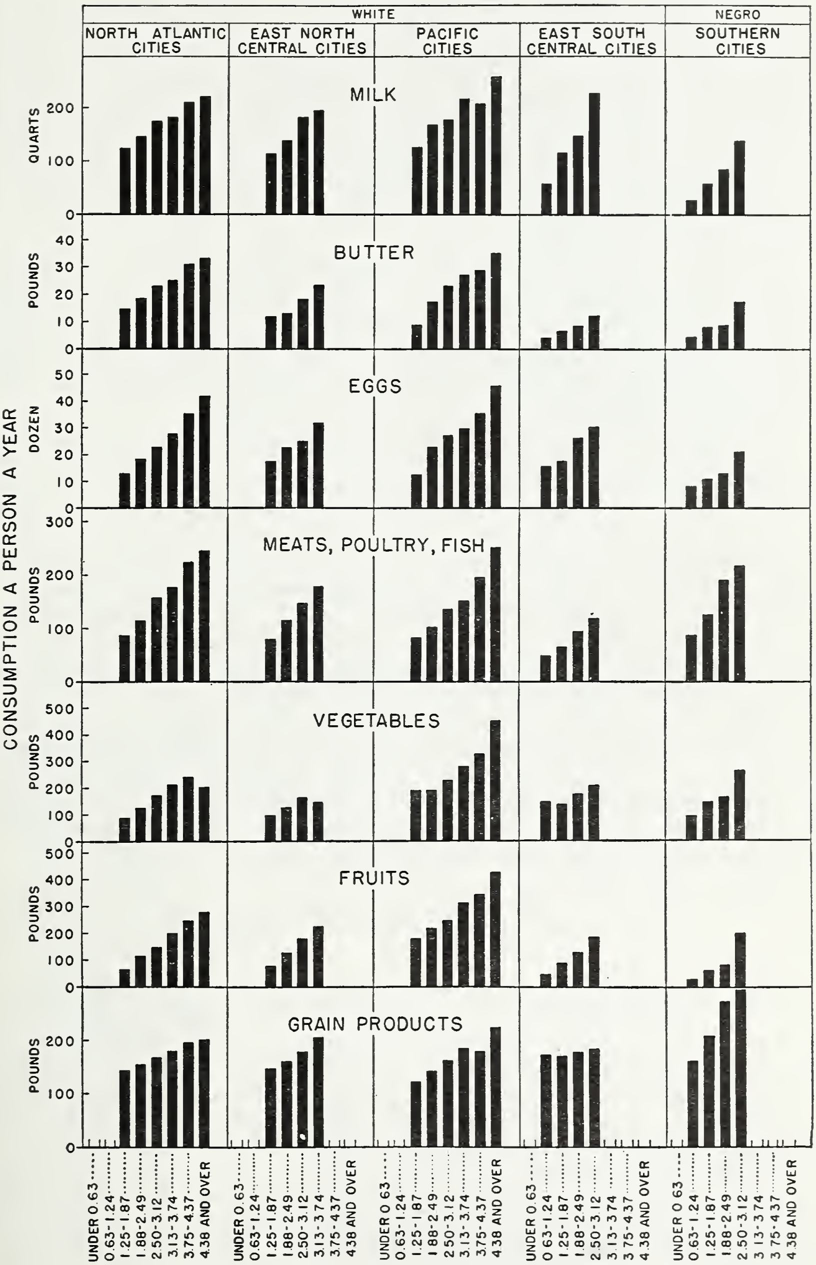

FIGURE 3.—Average consumption per person per year of specified articles or groups of foods, by families in different regions spending different amounts for food.

SEASONAL TRENDS IN FOOD CONSUMPTION

Modern city markets offer throughout the year a great variety of foods from which the housewife may choose. She may select at all seasons a number of fresh fruits, vegetables, and other perishable foods which have been rapidly transported in perfect condition, perhaps thousands of miles from the site of production, or which have been kept under special storage conditions for weeks beyond the production period. Much variety has been made possible also by commercial canning. In addition, there is an assortment of foods preserved by quick freezing, which retain many of the characteristics of fresh products.

The effect of these improved facilities and methods for storing, shipping, marketing, and preserving food products has been to eliminate the influence of time of year upon the availability of many foods and to extend the season for others. However, the quantities of the different kinds of foods that families purchase are dependent not only upon what is available but upon price and quality.

Food records collected in each season of the year in three regions, North Atlantic, East South Central, and Pacific, show some of the seasonal differences in food consumption that occurred in 1935. Data from these three regions were selected because there was adequate representation at each season. Furthermore, as may be seen in table 9, the distribution of families into the food-spending classes was similar in each season. Among families in each seasonal group, the ratio of adults to children was practically identical. The seasonal data may therefore be considered to represent groups of families of similar average composition and food-purchasing power. Comparisons drawn from this material are given for specified foods in tables 20–23.

Eggs follow a marked seasonal trend in retail prices. In the spring and early summer, production is at a peak and prices usually are at their lowest. Families in each of the three regions bought more eggs in the spring than in other seasons. Less seasonal variation appears in the figures for eggs in table 20 than might be expected, perhaps due to the fact that data are combined into 3-month averages.

TABLE 20.—*Eggs, milk, and fats: Estimated per-capita consumption of white families in 3 months, by region and season*

Region and season	Records	Eggs	Fresh milk	Evaporated, condensed milk	All fats
North Atlantic, 1935:	*Number*	*Dozen*	*Quarts*	*Pounds*	*Pounds*
Spring	253	6.5	30	3.3	11.0
Summer	203	5.2	31	3.3	9.8
Fall	160	4.2	27	4.0	9.2
Winter	154	6.2	34	3.0	10.2
East South Central, 1935:					
Spring	73	6.2	21	6.5	15.7
Summer	87	5.3	25	4.9	15.4
Fall	68	5.4	25	5.2	15.6
Winter	54	5.4	25	4.5	15.4
Pacific, 1935:					
Spring	74	7.8	30	6.9	15.7
Summer	175	6.3	31	6.0	13.4
Fall	80	6.7	35	5.9	12.8
Winter	112	6.4	29	5.0	13.7

The consumption of fresh milk, also shown in table 20, showed no consistent seasonal variation in the diets of these city families. This is not surprising since city retail milk prices remain fairly constant. The surplus production of the summer months tends to go into butter, cheese, and canned or dried milks rather than into the fluid-milk market. Considerable uniformity in consumption throughout the year was found for evaporated and condensed milk and for all kinds of fats.

Meat purchases, shown in table 21, appear to follow a seasonal trend. Families in all groups purchased larger quantities of meat, poultry, and fish in winter than in other seasons. The purchases declined somewhat in spring, were usually lowest in summer, and rose again in the fall. The average per-capita consumption by North Atlantic families in spring, summer, fall, and winter was, respectively, 33, 31, 34, and 41 pounds. In general, the consumption of specific items within this class of foods followed the same trend, with largest quantities purchased in fall and winter and smallest in summer. These seasonal variations reflect to some extent the seasonal changes in meat prices, but they are probably also due in part to changes in consumer demands which accompany seasonal changes in temperature.

TABLE 21.—*Lean meat, poultry, and fish: Estimated per-capita consumption of white families in 3 months, by region and season*

Region and season	Records	Beef, veal	Mutton, lamb	Pork [1]	Miscellaneous meat products	Poultry	Fish, other sea food	Total meat, poultry, fish
North Atlantic, 1935:	*Number*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Spring	253	13.3	2.6	6.0	3.2	2.5	5.2	32.6
Summer	203	12.3	3.0	5.0	3.0	3.2	4.8	31.2
Fall	160	13.4	2.5	5.2	3.4	3.9	5.4	33.8
Winter	154	15.0	3.2	6.7	4.3	6.6	5.5	41.4
East South Central, 1935:								
Spring	73	8.2	.4	3.0	3.0	1.6	2.3	18.4
Summer	87	7.8	.5	1.6	2.5	2.3	3.6	18.2
Fall	68	10.1	.1	2.9	3.4	2.6	2.9	21.9
Winter	54	9.3	0	4.4	5.3	2.9	2.2	24.1
Pacific, 1935:								
Spring	74	14.5	3.5	3.5	1.9	2.9	5.1	31.4
Summer	175	12.8	4.2	2.0	3.7	2.8	4.8	30.2
Fall	80	14.3	3.4	.8	2.7	3.6	5.2	30.1
Winter	112	17.0	4.8	3.4	4.4	3.0	3.9	36.4

[1] Exclusive of bacon and salt pork.

The seasonal consumption of some individual fruits and vegetables is shown in tables 22 and 23. Since potatoes are available at comparatively low prices throughout the year, there are no marked seasonal trends in consumption. Through commercial storage the fall crop of late potatoes serves consumer demand until the new crop from southern States is available in the spring.

The consumption of sweetpotatoes, on the other hand, follows a distinct cycle. The quantities purchased declined from a relatively high level in the fall to a low level in summer.

Although city markets offer a wide variety of fresh fruits and vegetables throughout the year, the seasonal variations in the purchases of these foods by city families tend to follow the periods of greatest abundance and lowest prices in local markets. In general, fresh vegetables, such as snap beans, corn, tomatoes, and peas were purchased in relatively large quantities in summer. On the other hand, the consumption of carrots, and, in some regions, of cabbage varied little from season to season. During the winter season when fresh vegetables tend to be less plentiful and consequently more costly, the diets of these city families contained somewhat more canned vegetables and dried peas and beans than in other seasons.

Usually from two to four times as many apples were used in fall and winter as in summer. Relatively more citrus fruits were purchased in winter and in spring than in other seasons of the year. Because of the greater availability of other fresh fruits in summer, it is not surprising to find that dried fruits were used least in summer and most in fall and winter.

Among seasonal trends in the food consumption of these city families, the most notable occurred in the purchase of meats and of certain fruits and vegetables. With the exception of a few of the latter, such as fresh corn or apples, the seasonal differences were relatively small. This would not have been true a generation ago, and indicates progress in the marketing and distribution of food.

TABLE 22.—*Vegetables: Estimated per-capita consumption of white families in 3 months, by region and season*

Region and season	Records	Fresh								Canned			Dried
		Potatoes	Sweetpotatoes	Beans, snap	Cabbage	Carrots	Corn	Peas	Tomatoes	Corn	Peas	Tomatoes	
North Atlantic:	*Number*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
Spring	253	42. 8	0. 4	1. 6	2. 7	2. 5	0	0. 6	2. 3	1. 1	1. 7	2. 2	3. 4
Summer	203	36. 4	. 1	2. 9	5. 1	2. 9	4. 6	1. 5	7. 9	. 8	1. 0	1. 5	2. 7
Fall	160	40. 2	1. 9	. 4	3. 8	3. 1	1. 3	. 3	3. 5	1. 1	2. 1	2. 3	3. 5
Winter	154	33. 5	1. 5	1. 4	3. 2	2. 9	0	. 9	1. 6	1. 4	1. 8	3. 0	3. 5
East South Central:													
Spring	73	21. 3	3. 3	4. 6	2. 8	1. 1	1. 8	. 9	4. 0	1. 2	1. 0	1. 3	3. 6
Summer	87	20. 7	1. 5	4. 9	2. 9	. 7	11. 6	5. 0	14. 0	. 1	. 5	1. 6	2. 9
Fall	68	18. 9	9. 1	3. 3	3. 1	. 9	2. 2	1. 4	9. 2	1. 3	. 9	1. 9	3. 8
Winter	54	17. 4	7. 7	. 8	3. 2	. 9	0	. 1	1. 0	1. 7	1. 0	2. 8	5. 5
Pacific:													
Spring	74	38. 3	. 6	. 9	1. 9	5. 8	0	5. 2	3. 7	1. 0	1. 9	2. 4	2. 3
Summer	175	27. 3	. 1	5. 7	2. 4	5. 1	5. 7	5. 0	13. 8	1. 1	. 8	1. 2	2. 5
Fall	80	37. 9	3. 2	1. 4	2. 3	6. 6	2. 3	. 7	8. 0	1. 4	1. 7	1. 0	2. 3
Winter	112	30. 4	1. 4	. 4	3. 6	5. 3	0	1. 2	2. 0	2. 0	1. 9	1. 6	3. 4

TABLE 23.—*Selected fruits: Estimated per-capita consumption of white families in 3 months, by region and season*

Region and season	Records	Apples	Grapefruit	Oranges	All canned fruits	All dried fruits
North Atlantic:	*Number*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Spring	253	6. 4	3. 4	9. 0	2. 6	1. 3
Summer	203	2. 9	. 7	7. 9	2. 5	. 7
Fall	160	11. 4	1. 2	5. 3	2. 5	1. 1
Winter	154	14. 0	2. 6	9. 2	3. 1	1. 9
East South Central:						
Spring	73	3. 6	1. 6	3. 3	2. 2	. 8
Summer	87	2. 5	. 8	2. 9	1. 9	. 5
Fall	68	7. 4	. 2	3. 3	1. 7	1. 5
Winter	54	8. 4	1. 6	7. 0	2. 7	1. 2
Pacific:						
Spring	74	6. 6	6. 5	20. 3	7. 8	2. 1
Summer	175	5. 3	3. 8	14. 0	3. 7	1. 2
Fall	80	18. 3	1. 9	7. 8	6. 5	3. 5
Winter	112	17. 8	5. 9	14. 7	6. 4	2. 3

EFFECT OF HOUSEHOLD COMPOSITION ON CONSUMPTION

In many studies of food consumption an inverse relationship has been found between size of family and per-capita consumption of milk, meat, and some other foods. This probably reflects the inability of families to increase food expenditures in proportion to increases in family size and the expanding demands for food on the part of growing children. But when food expenditures are equally generous with respect to need, per-capita food purchases of families with and without children should indicate whether family type influences the character of the diet. They should suggest whether families with young children consume more of those foods which the science of nutrition has shown to be of particular significance for growth and development, or whether children beyond infancy eat the various kinds of food in about the same proportion as adults.

TABLE 24.—*Estimated per-capita consumption in 3 months of specified groups of food by families with and without children under 16 years of age*

Region, season, weekly per-capita expenditure for food,[1] and household composition	Records	Eggs	Fluid milk equivalent [2]	Butter, other fats, oils, fat meat	Lean meat,[3] poultry, fish	Sugars	Grain products [4]	Potatoes, sweetpotatoes	Mature beans and peas, nuts	Dried fruits	Tomatoes, citrus fruits	Leafy, green, and yellow vegetables	Other vegetables and fruits
North Atlantic:													
Spring, 1935:													
$1.88–$2.49:	*No.*	*Doz.*	*Qts.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
Adults only	20	5.0	35	9.2	31	17	33	46	3.1	19	20	1.1	29
2 adults; children under 16 years	26	5.9	42	8.3	24	19	36	40	4.2	12	11	.9	28
3 or more adults; children under 16	27	5.1	30	9.8	28	16	36	42	3.9	16	15	.8	25
$2.50–$3.12:													
Adults only	32	7.8	38	14.4	38	18	43	46	3.4	18	24	1.6	30
2 adults; children under 16 years	18	6.5	46	11.0	29	16	42	48	4.6	18	16	2.0	35
3 or more adults; children under 16	24	6.3	42	11.3	40	17	43	40	4.2	19	20	1.5	29
Summer, 1935:													
$2.50–$3.12:													
Adults only	24	4.7	49	9.6	39	19	36	46	3.7	17	22	.7	44
2 adults; children under 16 years	17	5.2	48	8.9	34	12	41	28	4.6	35	21	.4	54
3 or more adults; children under 16	17	5.3	42	10.9	32	15	38	36	5.4	24	24	1.0	65
East North Central:													
Spring, 1936:													
$2.50–$3.12:													
Adults only	19	7.7	38	16.4	39	17	47	49	6.6	23	24	.9	39
2 adults; children under 16 years	15	7.4	41	13.6	36	17	49	40	4.6	20	24	.2	40
3 or more adults; children under 16	11	7.0	49	16.0	30	13	46	35	4.1	24	22	.5	42
Pacific:													
Summer, 1935:													
$1.88–$2.49:													
Adults only	15	5.2	34	11.5	23	24	31	21	3.6	47	29	.6	93
Adults; children under 16 years	38	5.4	47	9.9	20	17	35	29	3.7	24	24	1.0	69
$2.50–$3.12:													
Adults only	21	5.5	37	15.7	36	16	34	31	3.6	44	32	1.1	107
Adults; children under 16 years	29	6.5	47	12.5	32	19	36	27	3.0	40	29	2.3	76

[1] See footnote 1, table 3.
[2] See footnote 2, table 10.
[3] Exclusive of bacon and salt pork.
[4] See footnote 2, table 13.

Six comparisons have been made of the per-capita consumption of families of adults with that of families including one or more children under 16 years of age. Each comparison is made for a specified region, season, and level of food expenditure. In four of the six comparisons the families with children have been divided into two classes—those consisting of two adults with one or more children under 16 years of age, and those consisting of three or more adults, with one or more children under 16 years. In the other two comparisons all families including children under 16 years have been averaged together, regardless of the number of adults.

The average per-capita consumption of specified groups of foods, by families in each of the three household composition types, is shown in table 24. Although differences attributable to household composition are not clear-cut for all food groups, there are some. Milk, meat, and fats definitely show the influence of family type. The consumption of milk tends to be higher in families with children, and of meat and fats in adult families. In 7 of the 10 groups of families including children, per-capita milk consumption was higher than in the comparable group of adult families. In 7 of the 10 groups, the consumption of grain products was somewhat higher. On the other hand, nine of the groups including children reported lower per-capita consumption of meat, poultry, and fish; eight of the groups, lower consumption of fats; seven of the groups, lower consumption of sugars; eight, lower consumption of potatoes; and six, of the leafy, green, and yellow vegetables. Of other vegetables, fruits, and eggs, differences were not so uniformly in one direction or the other.

NUTRITIVE VALUE OF DIETS

In this study, as is now common practice in large-scale dietary investigations, the nutritive value of the food was estimated by applying average figures on composition to the data on consumption.

Most of the information on food composition was taken from published compilations (*2, 6, 8, 9, 11, 17, 35, 36, 39, 45, 52*), although for some items additional material was assembled from recent scientific journals.[4] In the main, the data represent the nutritive value of the edible portion of fresh uncooked food materials. Since most of the figures take no account of the almost inevitable losses in vitamins, minerals, fat, and other nutrients that may result from storage or from heating and other processes involved in food preparation, these estimates tend to be high.

The consumption data of this study refer to quantities of food brought into the kitchen for family meals, rather than to quantities actually eaten. In estimating the nutritive value of this food supply, account was taken of the average percentage of refuse or inedible material in the different articles of food purchased. No deductions were made, however, for kitchen or plate waste of edible food. Waste probably was very low in the case of families in straitened circumstances, but may have been considerable among those spending large amounts for food. For this reason, also, the figures on nutritive value which follow tend to be higher than values of actual food intake. However, if the waste of edible food consisted more largely of the cheaper fats, sugars, and breads, or other grain products, than of "protective" foods—milk, vegetables, fruit, and eggs—the food actually eaten was richer in minerals and vitamins in proportion to calories than the computations indicate.

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[4] The authors acknowledge with thanks the special assistance of Charlotte Chatfield, Georgian Adams, Florance King, Lela Booher, and Thelma Porter.

The nutritive value of the food has been computed in terms of calories, protein, calcium, phosphorus, iron, vitamin A value, vitamin B_1 (vitamin B_1 hydrochloride, or thiamin), ascorbic acid (vitamin C), riboflavin (vitamin G), and the pellagra-preventive factor. This list does not, of course, cover the full range of nutritive values. It includes only those for which some information is available as to distribution in common foods and as to human requirements, and those of which shortage is sometimes encountered.

METHOD OF PRESENTATION

The data from this study are too numerous to present family by family, and yet are too few to permit satisfactory averages to be drawn for families classified by size and composition. They are presented, therefore, in terms of averages for a person a day and for each requirement unit a day.

Nutritive values a person a day.—In this computation all individuals regardless of age, size, sex, or activity, are considered equally important with respect to food consumption. As explained on page 6, the number of persons to which each household was equivalent, was computed from the ratio of the total number of meals served during the week to the number, 21, considered the weekly quota for one person. Thus, if 36 meals—14 breakfasts, 8 lunches, and 14 dinners—were served, the household was considered equivalent to $\frac{36}{21}$ or 1.7 persons. For this family the nutritive value of the diet a person a week would be obtained by dividing the total quantity of each nutrient furnished by the food, by 1.7. These weekly figures divided by 7 give the values for a person a day.

This computation involves only slight statistical manipulation of data. There is the added advantage that the concept is easily understood. Figures on a person basis are fairly satisfactory for comparing averages that refer to relatively large numbers of families and that represent equally homogeneous samples of the population.

Nutritive values a nutrition-requirement unit a day.—Useful as per-capita figures are for making approximate comparisons between averages of similar groups, they are unsatisfactory for precise comparisons of nutritive values with standards of reference for dietary adequacy.

For ease in dealing statistically with data from this viewpoint, investigators have devised schemes for equating the nutritional needs of families of varying composition. This is done by assigning to each individual in a family a weight according to his estimated food requirements. The weighting involves the development of scales for determining the number of consumption units to which a family group is equivalent in terms of arbitrarily chosen values of unity. Atwater (*32*) in 1886 stated the problem thus:

> If * * * we could take a particular class, as laboring men at moderate work, and find to how many average men of this class the people nourished by each dietary would be equivalent in their demands for nutrients, we should simply have to divide the total quantity of nutrients supplied per day by this equivalent number of men to get the quantities per man per day.

The scales first used in the United States to indicate the relative food consumption of different members of the family were rough measures of food requirements expressed in terms of fuel value.

This is natural since, of the several measurements of food intake, that of its energy value probably is most closely related to total quantity eaten. Also more is known, and for a longer time more has been known, of relative energy requirements of persons of different ages and activity than of their relative requirements for protein, minerals, or vitamins.

When dietary scales were first evolved, the requirement of the chief male earner was taken as unity regardless of his occupation or body build, and the relative needs of other family members were indicated by fractions of his requirements. But comparisons from one population group to another can be made on this basis only if the requirements of the chief earner are similar. Discussing this with reference to energy requirements, Sherman (*18*) wrote in 1917:

> In computing the food requirements of family groups, it has been customary to regard the man as the unit and assume that the food of each child may be represented by some appropriate fraction of the food of the father.
>
> But * * * the food requirement of a man varies so greatly, according to his occupation, that it seems hardly logical to make this the basis for estimating the dietary needs of a family. Thus a carpenter may require 3,500 calories per day; a tailor, 2,500; a 14-year-old son of either of these men, 2,800 calories. With the carpenter as the unit, the boy's requirement would be represented by 0.8 of that of the father; but with the tailor as the unit, the allowance of 0.8 would obviously provide far too little food for the boy's needs. The Atwater dietary standards for children were stated as decimal fractions of the requirements of a man at moderately active muscular work, such as a carpenter requiring 3,400 or 3,500 calories * * *.
>
> In our opinion the food requirement of each member of the family should be determined on his own merits rather than in terms of the man's requirement.

In present-day construction of dietary scales, therefore, the value of unity in each scale usually is a fixed quantity. The requirement of each family member as determined by his age, size, body build, physical activity, or other factors, is then represented by an appropriate fraction or multiple of unity. Any change in the value of unity necessitates a new scale. In energy-requirement scales, for example, 3,000 calories has generally been used to represent unity. To adopt the suggestion of the Technical Commission on Nutrition of the League of Nations' Health Organisation (*23*) that 2,400 calories, the requirement of a sedentary adult, be taken as unity, means a new scale. Table 25 gives estimated energy requirements of a certain family group and shows how a change in the value of unity affects the apparent size of household in requirement units.

Lack of uniformity in the value of unity necessitates care in the interpretation of results. If the diet of the family illustrated in table 25 furnished a total of 10,000 calories a day, this total would amount to 83 percent of the estimated requirement of 12,000 calories. Per energy-requirement unit, it would amount to 2,000 calories according to one scale (column 3) and to 2,500 calories according to the other (column 4). These figures also are 83 percent of 2,400 and 3,000 calories, respectively, the values of unity on which the scales of equivalents were based. Erroneous conclusions would be drawn only if the observed values per energy-requirement unit were compared with standards other than the value of unity to which the scale refers. This point is emphasized because many investigators fail to report either the scale used or the value of unity which should form a frame of reference for the reported value. Also, without recognizing this source of error, results from one study are often directly compared with those of others in which different scales have been used.

The several scales used in this report to determine, nutrient by nutrient, the number of requirement units to which families are equivalent are discussed in the following sections. It should be emphasized that the computation of family size in nutrition-requirement units involves the use of fairly arbitrary dietary allowances for different individuals. These allowances, representing the judgment of one or more persons, probably will need revision from time to time as further knowledge accumulates. When they are revised, it will be necessary also to recompute the size of household in nutrition-requirement units, and hence the value of the diet per unit.

TABLE 25.—*Effect of variation in the value represented by unity on the number of energy-requirement units to which a family is equivalent*

Sex, age, and activity of family members (1)	Estimated energy requirement (2)	Family size in energy requirement units when value of unity is—	
		2,400 calories (3)	3,000 calories (4)
	Calories	*Number*	*Number*
Child, aged 3 years	1, 200	0. 50	0. 40
Boy, 8 years, moderately active (5–6 hours light work)	2, 100	. 88	. 70
Boy, 15 years, very active (8 hours moderate work)	3, 600	1. 50	1. 20
Wife, 38 years, active, 70 kg (4 hours moderate work)	2, 700	1. 13	. 90
Husband, 40 years, sedentary, 70 kg (no manual work)	2, 400	1. 00	. 80
Total	12, 000	5. 01	4. 00

The absolute value represented by unity in the several scales will, of course, differ for each of the nutrients, and for each, should represent equally satisfactory allowances. For example, so far as is known, a daily allowance of 0.68 g of calcium is about as generous with respect to the requirement of a 70-kg man as is 67 to 70 g of protein, or 0.012 to 0.015 g of iron. But the fraction of each of these values that represents a satisfactory allowance for a preschool child will differ. His calcium requirement may be 50 percent higher than that of a 70-kg man, while his protein requirement may be only half as great.

The different scales needed in computing the number of units to which a family is equivalent with respect to the different food factors should be clearly labeled to avoid confusion. In this report, such terms as energy-requirement scales and calcium-requirement scales are used to designate separate scales, and in speaking collectively of all of them, the phrase nutrition-requirement scales is employed.

NUTRITIVE VALUE BY LEVEL OF FOOD EXPENDITURE AND BY REGION

FOOD-ENERGY VALUE

The fuel that the body needs to supply energy for the activities of life, work, and play is measured in calories. Normal adults of similar age and physique require about the same amount of food energy when they are performing equivalent amounts of muscular work (*33*, *45*).

But age and body build affect requirements to some extent. A tall, thin, tense person usually has a slightly higher requirement than a short, stout, placid person of the same weight and age, if they perform about the same amount of muscular work. A 70-kg man in the prime of life, engaged in the moderately active muscular work of a carpenter or mechanic, may require between 2,700 and 3,300 calories daily. With advancing age, requirements tend to decline.

Food-energy allowances of children must cover the requirements for growth as well as for maintenance and activity (*45*, *58*). Per unit of body weight children may need from 50 to 100 percent more calories than adults. Since a normal rate of growth in height and weight is one index of the adequacy of the food-energy supply, the usual intake of healthy normally growing children is a fair measure of energy requirement.

Table 26 shows the calorie allowances suggested for individuals in different age, sex, and activity categories. The fact that a single figure is given for a wide age or activity range indicates the approximate character of these allowances. In general, calorie allowances should be set fairly close to probable requirements, as indicated by the usual food intake of healthy persons. No addition as a margin of safety is made, such as in the case of proteins, minerals, and vitamins, since there is believed to be no advantage and some distinct disadvantages in a surplus of calories.

TABLE 26.—*Food energy: Suggested daily allowances, and Bureau of Home Economics requirement scale*

Description of individual					Suggested allowances	Requirement scale
Sex, age, and activity	Average height		Average weight			
	Inches	*Centimeters*	*Pounds*	*Kilograms*	*Net calories*	*Units*
Men, 20–59 years [1]	68	173	154	70		
Moderately active work					3,000	1.00
Very active work					4,500	1.50
Light work					2,700	.90
Sedentary work					2,400	.80
Women, 20–59 years [1]	64	163	132	60		
Moderately active work					2,500	.83
Very active work					3,000	1.00
Light work					2,300	.77
Sedentary work					2,100	.70
Boys:						
16–19 years	68	173	139	63	3,600	1.20
13–15 years	63	160	111	50	3,000	1.00
11–12 years	57	145	82	37	2,500	.83
9–10 years	53	135	68	31	2,400	.80
7–8 years	49	125	55	25	2,100	.70
4–6 years	42	107	40	18	1,500	.50
Girls:						
14–19 years	64	163	121	55	2,500	.83
11–13 years	58	147	89	40	2,400	.80
8–10 years	52	132	64	29	2,100	.70
4–7 years	42	107	39	18	1,500	.50
Children:						
2–3 years	35	89	29	13	1,200	.40
Under 2 years	30	76	22	10	900	.30

[1] A reduction of about 10 percent was made in calorie allowances for persons between the ages of 60 and 75, and of about 20 percent for those over 75 years. Some adjustments were also made for persons in each group whose height was above or below average.

In developing a simple energy-requirement scale from these figures, 3,000 calories, a tentative allowance for a 70-kg man engaged in moderately active muscular work, has been taken as unity, and the relative allowances range from 0.3 for the very young child to 1.5 for the man at severe muscular work. This scale was used for computing the number of energy-requirement units to which each family was equivalent. For a family of four the computation might be as follows:

	Unit
Father	1. 0
Mother	. 9
Boy, aged 10	. 8
Girl, aged 5	. 5
Total	3. 2

The energy allowance for each adult was made after a consideration of height and degree of muscular activity, as reported in each food record.

Two scales for determining family size in terms of food-energy-requirement units have been used: (1) The Bureau of Home Economics scale, just described, and (2) the international scale, proposed in 1932 by a committee of experts meeting under the auspices of the League of Nations (*24*). The latter scale is based on a value of unity of 3,000 calories, gross, or 2,700 calories, net. The food-requirement coefficients for individuals of different age and sex are as follows:

	Unit		Unit
Under 2 years	0. 2	10–11 years	0. 7
2–3 years	. 3	12–13 years	. 8
4–5 years	. 4	14–59 years, male	1. 0
6–7 years	. 5	14–59 years, female	. 8
8–9 years	. 6	Over 60 years	. 8

The discussions in this circular are confined to the average food-energy values per unit according to the Bureau's scale, because this scale is believed to reflect more closely than the international scale the food needs of persons living under American conditions. The computations based on the international scale are included in tables referring to food-energy values, however, in order to make possible direct comparisons of these data with results of studies in other countries.

Table 27 shows average family size in terms both of the number of individuals comprising it and the number of energy-requirement units, using both the international and Bureau of Home Economics scales. A study of these figures will give a clearer idea of the extent to which energy values expressed on a requirement-unit basis will differ from those on a per-capita basis. Usually the average number of energy-requirement units is less than the number of persons, and hence the energy values of diets are higher when expressed on an energy-requirement-unit basis than on a per-capita basis. The differences tend to be proportionately greater at the lower levels of expenditure for food than at the higher, because families having a large number of young children tend to be found at low levels of food expenditure.

Table 27 also shows the average energy value of the diets of groups of families in different regions, spending different amounts for food. For families at three food-expenditure levels the distribution according to the energy value of the food supply is shown. Funds did not permit the computation of the nutritive value of diets of individual families at all levels of food expenditure.

TABLE 27.—*Food-energy value of diets: Averages per day, a person and an energy-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size			Average value			Diets furnishing per unit (Bureau of Home Economics scale) per day—				
		Persons	Requirement units		Per person	Per requirement unit		Under 2,400 calories	2,400–2,699 calories	2,700–3,299 calories	3,300–3,599 calories	3,600 calories and over
			International scale	Bureau of Home Economics scale		International scale	Bureau of Home Economics scale					
$0.63–$1.24:	*Number*	*Number*	*Number*	*Number*	*Calories*	*Calories*	*Calories*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
White:												
East South Central	17	5.68	4.25	4.38	2,030	2,700	2,620	------	------	------	------	------
Negro:												
South	84	5.19	3.94	4.13	1,940	2,560	2,450	------	------	------	------	------
$1.25–$1.87:												
White:												
North Atlantic	117	5.76	4.40	4.55	1,990	2,610	2,530	38	25	30	4	3
East North Central	70	4.94	3.79	3.94	2,100	2,760	2,650	33	35	20	9	3
West North Central	16	5.77	4.64	4.95	1,990	2,470	2,310	56	19	25	0	0
South Atlantic	20	5.42	4.12	4.25	2,160	2,820	2,740	35	0	50	5	10
East South Central	114	5.38	4.17	4.24	2,410	3,110	3,050	11	14	40	21	14
West South Central	11	5.06	3.85	4.04	2,150	2,830	2,690	18	37	36	0	9
Mountain	10	5.39	4.14	4.32	1,990	2,590	2,470	40	40	20	0	0
Pacific	21	4.43	3.41	3.43	2,000	2,580	2,570	38	29	29	0	4
Negro:												
South	83	3.28	2.66	2.65	2,800	3,450	3,460	10	10	27	6	47
$1.88–$2.49:												
White:												
North Atlantic	240	4.94	3.90	3.90	2,340	2,960	2,960	------	------	------	------	------
East North Central	119	4.10	3.22	3.29	2,540	3,240	3,140	------	------	------	------	------
West North Central	27	4.63	3.44	3.64	2,460	3,320	3,130	------	------	------	------	------
South Atlantic	34	4.64	3.78	3.88	2,680	3,300	3,220	------	------	------	------	------
East South Central	97	4.29	3.48	3.48	2,820	3,470	3,470	------	------	------	------	------
West South Central	20	3.42	2.62	2.76	2,480	3,070	3,230	------	------	------	------	------
Mountain	32	4.05	3.14	3.23	2,340	3,030	2,940	------	------	------	------	------
Pacific	137	3.89	3.03	3.06	2,450	3,140	3,100	------	------	------	------	------
Negro:												
South	37	2.78	2.35	2.28	3,650	4,310	4,310	------	------	------	------	------
$2.50–$3.12:												
White:												
North Atlantic	253	4.02	3.30	3.26	2,690	3,290	3,320	2	10	34	21	33
East North Central	129	3.35	2.72	3.12	3,060	3,790	3,710	2	5	26	19	49
West North Central	37	3.36	2.73	2.85	2,820	3,480	3,340	3	16	32	19	30
South Atlantic	34	3.52	2.83	2.82	2,950	3,660	3,660	0	0	35	12	53
East South Central	54	3.46	2.77	2.76	3,190	3,970	3,980	0	6	7	23	64
West South Central	8	3.32	2.75	2.77	3,370	4,070	4,030	0	12	0	25	63
Mountain	25	3.57	2.76	2.79	2,650	3,420	3,400	4	16	16	24	40
Pacific	132	3.39	2.73	2.71	2,940	3,600	3,660	0	3	27	19	51
Negro:												
South	18	2.21	1.94	1.91	4,220	4,800	4,880	0	0	6	0	94
$3.13–$3.74:												
White:												
North Atlantic	147	3.36	2.80	2.66	3,040	3,660	3,840	------	------	------	------	------
East North Central	53	2.91	2.40	2.44	3,530	4,360	4,270	------	------	------	------	------
West North Central	32	3.17	2.66	2.67	3,180	3,730	3,740	------	------	------	------	------
South Atlantic	10	3.34	2.80	2.74	3,050	3,650	3,730	------	------	------	------	------
Mountain	9	3.16	2.70	2.67	3,190	3,740	3,770	------	------	------	------	------
Pacific	76	2.79	2.31	2.21	3,400	4,100	4,140	------	------	------	------	------
$3.75–$4.37:												
White:												
North Atlantic	69	2.94	2.50	2.43	3,440	4,080	4,190	0	0	9	14	77
East North Central	10	2.51	2.18	2.19	3,870	4,440	4,440	0	0	0	10	90
Pacific	37	2.14	1.83	1.77	3,590	4,210	4,340	0	0	8	3	89
$4.38 and over:												
White:												
North Atlantic	17	2.84	2.39	2.37	3,830	4,500	4,600	------	------	------	------	------
Pacific	38	1.93	1.70	1.64	4,630	5,260	5,420	------	------	------	------	------

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[1] See footnote 1, table 3.

Per-capita energy values averaging from 2,500 to 2,800 calories per day, or values of 3,000 calories per energy-requirement unit, form a frame of reference for indicating that the food supply was sufficient, if equitably distributed, to provide each household member with calorie allowances as generous as those listed for individuals in table 26. Some deviation from the standard or reference point suggested may be accounted for in part by higher- or lower-than-average requirements. Values more than 20 percent higher probably indicate considerable kitchen or plate waste of food; whereas values more than 20 percent lower probably mean insufficient food.

For an expenditure of $1.25–$1.87 a person a week for food, most of the North Atlantic families were obtaining less food energy than is suggested by the allowances of table 26. The average, 2,530 calories per energy-requirement unit a day, is 15 percent below the average allowance of 3,000 calories. Almost 40 percent of the diets furnished less than 2,400 calories per unit. This represents a restricted food supply. At this expenditure level only a few cases were observed in which the calorie values were more than 20 percent above 3,000 calories.

With rising expenditures for food, diets of higher energy value were reported. At the expenditure level, $1.88–$2.49 a person a week, the average daily energy value of the diets of North Atlantic families was 2,960 calories a requirement unit. The average increased to 3,320 calories when the food expenditure was $2.50–$3.12 a person a week. This average represents a wide range in values for individual families. Thus 12 percent of the diets furnished less than 2,700 calories a requirement unit a day; 34 percent, between 2,700 and 3,300 calories; 21 percent, between 3,300 and 3,600; and 33 percent furnished over 3,600 calories a unit a day.

When food expenditures were $3.75–$4.37 a person a week, the average daily energy value of the food purchased by North Atlantic families was 4,190 calories per unit. Three-fourths of the diets provided more than 3,600 calories a unit a day. There was undoubtedly considerable waste in the households reporting diets of such high energy value.

The shift in the proportion of North Atlantic diets from low to high energy content with increasing food expenditure was typical of the trend in all regions. In the main, at a given level of food expenditure, the average energy values of diets of white families in different regions were much the same. The characteristic food choices of families in East South Central cities, however, yielded diets that were exceptionally high in calories.

The highest average calorie values at each level of food expenditure were those in diets of southern Negro families. Food costing $1.25–$1.87 a person a week yielded an average value of 3,460 calories per requirement unit. Nearly half of the Negro families in this group had diets furnishing over 3,600 calories a unit a day. At a higher level of food expenditure, $2.50–$3.12 a person a week, 94 percent of the diets of southern Negro families furnished over 3,600 calories a unit a day, with the average for the entire group at 4,880 calories a unit a day. These high figures reflect the large quantities of fats, flour, and meal, which characterize the dietary of the southern Negro.

PROTEIN

Proteins enter into the composition of every living cell. They are the chief organic constituents of the muscles and other soft tissues, and they furnish the material for the synthesis of many of the substances which regulate body processes. Sherman has concluded (*42, 45*) from a critical study of the experimental evidence that a daily intake of 44.4 g of protein covers average minimum requirements for the maintenance of nitrogen equilibrium in a 70-kg adult body. The range making up this average was from 21 to 65 g.

A 50-percent margin over average minimum requirements has generally been used in this country in setting a mark at which to aim in planning diets (*36 45*). This margin affords some protection to those persons whose requirements are above average, and helps to compensate for periods in which slight abnormalities of digestion or health may increase consumption requirements. Adding 50 percent to 44.4 g amounts to 67 g of protein, or almost 1 g daily per kilogram of body weight. This figure has often been rounded to 70 g for the 70-kg man. Ten percent of the calories from protein is an allowance also frequently suggested. For a man requiring 3,000 calories a day, the protein needed to supply 300 net calories would amount to 75 g.

Allowances ranging from 67 to 75 g of protein represent essentially the same standard—about half again as much as the average quantity needed to maintain nitrogen equilibrium. Because of smaller body size, women need about 10 to 15 percent less. In view of the approximate character of dietary allowances, however, the same figure, 67 g per adult has been used in this study which deals with family diets shared by both men and women.

During periods of rapid growth the protein requirements per unit of body weight are relatively high (*13, 28, 36, 45*). From 2½ to 3 g a kilogram may be needed daily in infancy and early childhood. The requirement per kilogram decreases gradually as the rate of growth lessens.

TABLE 28.—*Protein: Suggested daily allowance and requirement scale*

Sex and age group	Protein allowance	Requirement scale	Sex and age group	Protein allowance	Requirement scale
	Grams	*Units*		*Grams*	*Units*
Adults, 20 years and over	67	1.0	Boys, 4–6 years; girls, 4–7 years	55	0.8
Boys, 9–19 years; girls, 11–19 years	75	1.1	Children, under 4 years	45	.7
Boys, 7–8 years; girls, 8–10 years	65	1.0			

In the allowances for different individuals given in table 28, a little over 3 g of protein a kilogram of body weight are tentatively suggested for young children up to 7 years. The allowance per unit of weight is decreased gradually with increasing age until, as stated above, it is about 1 g a kilogram for adults. If 67 g be taken as unity in the development of a scale of relative allowances, the factors for persons of different age and sex range from 0.7 to 1.1. The scale shown in table 28 was used in this study for computing the number of protein-requirement units to which each family was equivalent. This number is usually about the same as the number of persons.

Consequently, figures for the protein content of diets are practically the same, whether expressed on a per-person or a protein-requirement-unit basis.

TABLE 29.—*Protein content of diets: Averages per day, a person and a protein-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size		Average content		Diets furnishing per unit per day—				
		Persons	Requirement units	Per person	Per requirement unit	Under 45 g	45–69 g	70–99 g	100–119 g	120 g and over
	Number	*Number*	*Number*	*Grams*	*Grams*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
$0.63–$1.24:										
White:										
East South Central	17	5.68	5.58	50	52	------	------	------	------	------
Negro:										
South	84	5.19	5.13	50	51	------	------	------	------	------
$1.25–$1.87:										
White:										
North Atlantic	117	5.76	5.67	63	64	5	67	28	0	0
East North Central	70	4.94	4.87	63	64	1	73	25	1	0
West North Central	16	5.77	5.78	63	63	0	75	25	0	0
South Atlantic	20	5.42	5.30	60	62	0	85	15	0	0
East South Central	114	5.38	5.32	64	65	2	73	24	0	1
West South Central	11	5.06	5.06	61	61	0	82	18	0	0
Mountain	10	5.39	5.35	59	59	10	80	10	0	0
Pacific	21	4.43	4.38	62	63	5	81	14	0	0
Negro:										
South	83	3.28	3.25	70	70	4	43	48	4	1
$1.88–$2.49:										
White:										
North Atlantic	240	4.94	4.90	74	75	------	------	------	------	------
East North Central	119	4.10	4.02	77	79	------	------	------	------	------
West North Central	27	4.63	4.55	78	80	------	------	------	------	------
South Atlantic	34	4.64	4.67	80	80	------	------	------	------	------
East South Central	97	4.29	4.30	78	78	------	------	------	------	------
West South Central	20	3.42	3.37	76	78	------	------	------	------	------
Mountain	32	4.05	3.96	72	74	------	------	------	------	------
Pacific	137	3.89	3.84	76	77	------	------	------	------	------
Negro:										
South	37	2.78	2.77	92	89	------	------	------	------	------
$2.50–$3.12:										
White:										
North Atlantic	253	4.02	4.01	88	88	0	7	75	17	1
East North Central	129	3.35	3.33	93	94	0	3	64	26	7
West North Central	37	3.36	3.33	88	88	0	11	76	11	2
South Atlantic	34	3.52	3.49	89	90	0	3	79	18	0
East South Central	54	3.46	3.41	92	93	0	10	64	15	11
West South Central	8	3.32	3.32	90	90	0	0	88	12	0
Mountain	25	3.57	3.47	83	86	0	16	52	32	0
Pacific	132	3.39	3.37	89	90	0	7	73	16	4
Negro:										
South	18	2.21	2.22	112	111	0	0	22	50	28
$3.13–$3.74:										
White:										
North Atlantic	147	3.36	3.36	98	98	------	------	------	------	------
East North Central	53	2.91	2.90	107	109	------	------	------	------	------
West North Central	32	3.17	3.18	101	100	------	------	------	------	------
South Atlantic	10	3.34	3.40	101	99	------	------	------	------	------
Mountain	9	3.16	3.22	98	97	------	------	------	------	------
Pacific	76	2.79	2.74	101	101	------	------	------	------	------
$3.75–$4.37:										
White:										
North Atlantic	69	2.94	2.94	116	116	0	0	17	39	44
East North Central	10	2.51	2.53	123	122	0	0	20	20	60
Pacific	37	2.14	2.15	111	111	0	0	27	41	32
$4.38 and over:										
White:										
North Atlantic	17	2.84	2.86	123	122	------	------	------	------	------
Pacific	38	1.93	1.94	140	140	------	------	------	------	------

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[1] See footnote 1, table 3.

Table 29 gives for each regional group at each level of food expenditure, the average household size and average protein content of diets per person and per protein-requirement unit. The protein content increases steadily with increasing food expenditure, and at any one level of food expenditure the average values for white families show great uniformity from one region to another. The diets of southern Negro families were higher in protein than those of white families at all but the lowest level of food expenditure.

With a weekly food expenditure of $0.63–$1.24 a person, the diets of southern white and Negro families furnished, respectively, averages of 52 and 51 g of protein for each requirement unit. This is only about one-sixth more than the 44 g believed necessary to meet the average minimum requirements of a 70-kg man. It falls short of the suggested allowance of 67 g, by a wide margin. When $1.25–$1.87 weekly was spent for the food of each person, the diets of white families averaged from 59 g a unit in the Mountain region to 65 g in the East South Central region. All of these averages are slightly below the suggested allowance. The meaning of these averages can be seen in the distribution of families according to the protein content of their diets. The diets of some families spending $1.25–$1.87 a person a week for food furnished less than 45 g of protein a unit a day. In different regional groups, from 67 to 85 percent of the diets of white families furnished between 45 and 69 g and from 10 to 35 percent, between 70 and 99 g of protein a unit a day.

For the same expenditure for food, $1.25-$1.87 a person a week, the food supply of southern Negro families furnished an average of 70 g of protein a unit a day. This average meets the suggested allowance. However, 4 percent of the diets furnished less than 45 g of protein, and 43 percent, between 45 and 69 g a unit a day. About half of the Negro families bought food providing between 70 and 99 g of protein per unit daily.

Food purchased at a weekly cost of $1.88–$2.49 a person supplied an average of 74 to 80 g of protein a unit a day in the case of white families in different regions, and 89 g in diets of southern Negro families. These averages are well over the suggested daily allowance of 67 g of protein a unit a day.

The effect of rising food expenditure on the protein content of the diet is apparent not only in the average figures for each spending level but also in the distribution of diets according to protein content. Thus, with food expenditures of $2.50–$3.12 a person a week, the average protein content of diets of white families ranged from 86 to 94 g a requirement unit a day. All diets furnished as much as 45 g of protein, and only a small proportion less than 70 g. From about a half to three-fourths of the diets furnished between 70 and 99 g; and most of the remaining between 100 and 120 g a unit a day. At this level of food expenditure the diets of all Negro families furnished at least the suggested allowance of 67 g of protein, and three-fourths of the diets furnished more than 100 g a unit a day.

With food expenditures of $3.13–$3.74 a person a week, the average protein content of diets of different regional groups ranged from 97 to 109 g a unit a day. With expenditures above $3.74, the averages exceeded 110 g a unit a day, and no families had diets furnishing less than 70 g of protein a unit a day.

Considering the proportion of families at each level of food expenditure, as well as the protein content of the diets, it would appear that less than 2 percent of the white families represented by this study purchased food furnishing less than 45 g of protein a requirement unit a day. The diets of 25 percent of these families provided 70 g or less of protein a requirement unit a day; those of 50 percent, 82 g or less; while those of 75 percent provided approximately 95 g or less of protein a requirement unit a day. There is little likelihood of a serious deficiency in the quantity of protein in diets of many families of employed workers.

The quality as well as the quantity should be considered in judging the adequacy of the protein of the diets. Proteins found in different foods vary in composition. Some are more like those found in the human body than others, and hence, certain kinds, especially those derived from animal products, as milk, cheese, eggs, and lean meat, are especially efficient in supplying materials for building and maintaining the human body. These high-quality proteins supplement those found in grain and some other products, and together they make a combination which the body can use to good advantage.

A fair share of the total protein in the average food supply of the families studied was derived from products of animal origin. A few groups of families spending less than $1.25 weekly per person for food got as little as 35 percent of their protein from milk, cheese, eggs, and meat. Usually at least 40 percent of the protein came from these products and very frequently 50 percent or more. The quality as well as the quantity of protein in the diets of this population group would, then, in general appear to be adequate.

CALCIUM AND PHOSPHORUS

Calcium and phosphorus are the chief inorganic substances entering into the skeletal structures of the body. They also serve other important functions. Calcium in small quantities is necessary in soft tissues and body fluids and, according to Peters and Van Slyke (*34*), organic and inorganic phosphorus compounds function in the body in at least 14 ways. They play essential roles in intermediary metabolism as well as in building processes.

Sherman concluded after a critical study of nearly 100 balance experiments on both calcium and phosphorus (*43*, *44*, *45*), that the average minimum requirements for maintaining equilibrium were about 0.45 g of calcium and 0.88 g of phosphorus for a man of 70 kg of body weight. Diets of normal character but low in both nutrients were essential features of these studies.

The utilization of both calcium and phosphorus is influenced by a number of factors, including the ratio which they bear to each other, the quantity of vitamin D supplied by sunlight or food, and the quantity of fat in the diet (*31*). To allow for the variation likely to be encountered in everyday foods, and to safeguard those persons whose requirements are higher than average, a 50-percent margin has been added to average minimum requirements in formulating dietary allowances. These additions bring the allowances for acceptable diets to 0.68 g of calcium and 1.32 g of phosphorus a man a day.

Certain physiological conditions increase the relative requirements for these minerals. An abundance is needed for growth in infancy and childhood, and to cover the increased requirements of women during pregnancy and lactation.

Extensive studies of the mineral metabolism of children (*12, 47, 50*) indicate that an intake of a gram each of calcium and of phosphorus for a child each day results in good retentions when other factors are favorable. In this country, these quantities have been generally accepted as an adequate allowance for both calcium and phosphorus in diets of children. Extra calcium, enough to bring the daily intake to at least 1 g a day, should be provided for women in pregnancy and lactation.

In a recent evaluation of the data now available, Leitch (*27*) concludes that minimum gross requirements for calcium are as follows: From 6 months to 2 years, 0.8 g; from 2 to 9 years, 0.9 g; from 9 years, 1 g increasing to 2 g between 15 and 16 years; thereafter a gradual decrease to the adult maintenance requirement, which she believes to be about 0.55 g daily.

The League of Nations' Technical Commission on Nutrition (*25*) recommends that diets for men of 70-kg body weight should supply about three-fourths of a gram of calcium daily, for pregnant and nursing women about 1½ g, and, apart from breast-fed babies, for growing children, about 1 g daily. In most diets of natural food materials, phosphorus will be supplied in sufficient quantities when calcium is adequately provided.

Tables 30 and 31 give the tentative daily allowances of calcium and phosphorus for individuals of different age, and the scale used in this study for computing the number of calcium- and phosphorus-requirement units to which each family was equivalent. The number of calcium-requirement units to which a family is equivalent is larger than the number of persons when the family includes children. As a consequence, the average calcium content of the diets is usually a lower figure when expressed on a requirement-unit than on a per-capita basis. On the other hand, the number of phosphorus-requirement units to which families are equivalent is usually smaller than the number of persons in it, and the phosphorus content of diets on a requirement-unit basis is somewhat greater than on a per-capita basis.

TABLE 30.—*Calcium: Suggested daily allowance and requirement scale*

Sex and age group	Calcium allowance	Requirement scale
	Grams	*Units*
Men, 20 years and over	0.68	1.0
Women, 20 years and over	.88	1.3
Children, under 20 years	1.00	1.5

TABLE 31.—*Phosphorus: Suggested daily allowance and requirement scale*

Sex and age group	Phosphorus allowance	Requirement scale
	Grams	*Units*
Adults, 20 years and over	1.32	1.0
Boys, 13–19 years	1.32	1.0
Boys, 9–12 years; girls, 11–19 years	1.20	.9
Boys, 4–8 years; girls, 4–10 years	1.00	.8
Children, under 4 years	1.00	.8

Table 32 gives for regional groups, at seven levels of expenditure for food, average household size and average calcium and phosphorus content of the diets per capita and per requirement unit.

TABLE 32.—*Phosphorus and calcium content of diets: Averages per day, a person and a nutrition-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size			Average content				Diets furnishing per calcium-requirement unit per day				
		Persons	Phosphorus-requirement units	Calcium-requirement units	Phosphorus		Calcium		Under 0.30 g calcium	0.30–0.44 g calcium	0.45–0.69 g calcium	0.70–0.99 g calcium	1 g and over
					Per person	Per requirement unit	Per person	Per requirement unit					
$0.63–$1.24:													
White:	*No.*	*No.*	*No.*	*No.*	*G*	*G*	*G*	*G*	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*
East South Central	17	5.68	5.30	7.51	1.03	1.10	0.55	0.41	----	----	----	----	----
Negro:													
South	84	5.19	4.82	6.93	.99	1.06	.44	.33	----	----	----	----	----
$1.25–$1.87:													
White:													
North Atlantic	117	5.76	5.39	7.65	1.01	1.07	.58	.44	7	48	41	4	0
East North Central	70	4.94	4.61	6.51	1.01	1.08	.56	.42	10	47	37	6	0
West North Central	16	5.77	5.46	7.64	1.00	1.05	.56	.42	12	44	44	0	0
South Atlantic	20	5.42	5.06	7.13	1.10	1.17	.57	.44	20	40	35	5	0
East South Central	114	5.38	5.06	7.10	1.27	1.36	.73	.55	4	23	52	19	2
West South Central	11	5.06	4.71	6.79	1.00	1.08	.63	.47	0	55	36	9	0
Mountain	10	5.39	5.04	7.30	1.03	1.10	.66	.48	20	20	50	10	0
Pacific	21	4.43	4.14	5.89	1.08	1.16	.63	.47	5	33	52	10	0
Negro:													
South	83	3.28	3.15	4.12	1.35	1.40	.68	.54	10	24	41	19	6
$1.88–$2.49:													
White:													
North Atlantic	240	4.94	4.68	6.40	1.19	1.25	.70	.54	----	----	----	----	----
East North Central	119	4.10	3.88	5.27	1.23	1.30	.67	.52	----	----	----	----	----
West North Central	27	4.63	4.29	6.17	1.29	1.39	.77	.58	----	----	----	----	----
South Atlantic	34	4.64	4.40	6.10	1.45	1.53	.80	.61	----	----	----	----	----
East South Central	97	4.29	4.10	5.52	1.49	1.55	.88	.68	----	----	----	----	----
West South Central	20	3.42	3.21	4.47	1.28	1.36	.75	.57	----	----	----	----	----
Mountain	32	4.05	3.83	5.28	1.23	1.30	.82	.63	----	----	----	----	----
Pacific	137	3.89	3.68	5.04	1.28	1.36	.81	.62	----	----	----	----	----
Negro:													
South	37	2.78	2.72	3.39	1.70	1.73	.82	.67	----	----	----	----	----
$2.50–$3.12:													
White:													
North Atlantic	253	4.02	3.87	5.08	1.40	1.46	.82	.65	1	7	50	39	3
East North Central	129	3.35	3.21	4.22	1.49	1.56	.83	.66	2	6	54	33	5
West North Central	37	3.36	3.22	4.24	1.35	1.42	.76	.60	0	19	51	30	0
South Atlantic	34	3.52	3.36	4.48	1.52	1.54	.88	.69	0	15	44	38	3
East South Central	54	3.46	3.33	4.36	1.81	1.88	1.18	.94	0	2	26	37	35
West South Central	8	3.32	3.20	4.20	1.41	1.47	.78	.62	0	25	38	25	12
Mountain	25	3.57	3.41	4.52	1.38	1.44	.91	.71	0	12	28	44	16
Pacific	132	3.39	3.23	4.30	1.50	1.58	.90	.71	1	3	49	39	8
Negro:													
South	18	2.21	2.20	2.58	2.06	2.07	1.08	.92	0	0	22	56	22
$3.13–$3.74:													
White:													
North Atlantic	147	3.36	3.26	4.17	1.58	1.63	.91	.73	----	----	----	----	----
East North Central	53	2.91	2.82	3.61	1.71	1.79	.94	.76	----	----	----	----	----
West North Central	32	3.17	3.07	3.94	1.62	1.66	.90	.73	----	----	----	----	----
South Atlantic	10	3.34	3.23	4.27	1.73	1.79	1.05	.82	----	----	----	----	----
Mountain	9	3.16	3.08	3.95	1.59	1.63	1.05	.84	----	----	----	----	----
Pacific	76	2.79	2.65	3.41	1.73	1.79	1.06	.85	----	----	----	----	----
$3.75–$4.37:													
White:													
North Atlantic	69	2.94	2.88	3.56	1.85	1.89	1.03	.85	0	4	16	60	20
East North Central	10	2.51	2.47	2.99	1.82	1.85	.85	.71	0	10	40	30	20
Pacific	37	2.14	2.10	2.58	1.79	1.82	1.06	.88	0	3	16	46	35
$4.38 and over:													
White:													
North Atlantic	17	2.84	2.77	3.47	1.96	2.00	1.12	.91	----	----	----	----	----
Pacific	38	1.93	1.93	2.27	2.29	2.29	1.33	1.13	----	----	----	----	----

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[1] See footnote 1, table 3.

In general, the average calcium and phosphorus content of the diets increased with rising expenditures for food. At each food-spending level, the averages for the different regional groups show some variability, but those for the families in the South are definitely higher than others, especially at the lower expenditure levels. Figures for calcium and phosphorus in the food of families in the South take into account the quantities contributed by self-rising flour. The extensive use of this type of flour by southern families, amounting to about 50 percent of their total flour consumption, is reflected in the relatively high average calcium and phosphorus content of diets in the lower food-expenditure levels.

In East South Central cities, expenditures for food amounting to $0.63–$1.24 a person a week afforded to white families diets furnishing an average of only 0.41 g of calcium and 1.10 g of phosphorus a unit a day. Southern Negro families, spending this much for food, purchased food with an average calcium and phosphorus content of 0.33 g and 1.06 g, respectively.

With food expenditures of $1.25–$1.87 a person a week, white families obtained food supplying more than a gram of phosphorus a requirement unit a day. The average ranged from 1.05 g among West North Central families to 1.36 g among East South Central families. Diets of Negro families costing the same amount averaged 1.40 g of phosphorus a unit a day.

The average calcium content of diets costing $1.25–$1.87 a person a week was usually below one-half gram a unit a day. For seven of eight groups of white families in this category it ranged from 0.42 to 0.48 g. Twenty-seven to sixty percent of the families in different regional groups bought food that furnished less than 0.45 g of calcium a unit a day. For the same expenditure, southern families purchased food slightly higher in average calcium value than did families in other sections. For East South Central white families the average was 0.55 g of calcium; and for southern Negroes, 0.54 g of calcium a unit a day. Only about one-fourth of the southern families spending $1.25–$1.87 a person a week for food procured diets furnishing less than 0.45 g of calcium a unit a day.

When $1.88–$2.49 a person a week was spent for food, the average phosphorus content of the diets of families in the North and West was not far from the suggested allowance of 1.32 g a unit a day. It ranged from a low of 1.25 g among North Atlantic families to a high of 1.39 g for West North Central families. Southern families at this level of food expenditure had diets of higher phosphorus content, averaging, respectively, 1.53 and 1.55 g a unit a day for South Atlantic and East South Central white families, and 1.73 g for southern Negro families.

At the same food-spending level, $1.88–$2.49 a person a week, the average calcium values usually were somewhat below the suggested daily allowance of 0.68 g a unit a day. They ranged from 0.52 to 0.63 g for all groups of families except those in the East South Central group, where the average calcium content of diets was about 0.68 g a unit a day.

When city families spent $2.50 or more a person a week for food, the average phosphorus content of diets was well above the suggested daily allowance of 1.32 g a unit a day. Averages ranging from 1.42 to 2.29 g of phosphorus were furnished by diets of families in different regional groups.

The average calcium content of food supplies costing $2.50 to $3.12 a person a week showed considerable variation. In the case of four out of eight regional groups of white families, which included West South Central and northern families, the averages were between 0.60 and 0.66 g of calcium a unit a day. About 60 percent of the individual families represented by these averages were procuring diets containing less than 0.70 g of calcium. In the Southeast and far West, diets costing $2.50–$3.12 a person a week averaged 0.69 to 0.94 g of calcium a unit a day, larger quantities than in the other regional groups. From two-fifths to approximately four-fifths of the families included from these areas obtained diets yielding more than 0.70 g of calcium a unit a day.

With food expenditures of $3.13 or more a person a week, the average calcium content of diets exceeded the suggested allowance. However, even at the high food-spending level of $3.75–$4.37 a person a week, from 20 to 50 percent of the families were procuring diets containing less than 0.70 g of calcium a unit a day.

The data indicate that diets of families represented in this study are more likely to be adequate in phosphorus than in calcium. The average phosphorus content of the diets of all regional groups was above the daily minimum requirement of 0.88 g a unit. It was below the suggested allowance of 1.32 g a unit a day only among families at the two lowest food-spending levels. Phosphorus is more generally distributed in animal and vegetable foods than is calcium. In these diets, it was obtained chiefly from milk in its various forms, eggs, meat, cereal products, potatoes, and dried legumes.

Average calcium values, on the other hand, were frequently below the suggested daily allowance. Of white families observed in this study about one-sixth obtained diets furnishing 0.45 g or less of calcium a unit a day; one-fourth, 0.50 g or less; one-half, 0.67 g or less; and three-fourths of the families, 0.83 g or less of calcium a requirement unit a day. Less than half purchased food supplying 0.70 g or more of calcium a unit a day.

The chief sources of calcium were milk, cheese, ice cream, and, especially in the South, leafy, green, and yellow vegetables. The percentage of calcium derived from the several classes of foods varied with the total cost of the diet and with the traditional food habits of the families. In many instances, from approximately 60 to 70 percent of the calcium was derived from milk, cheese, and ice cream. Leafy, green, and yellow vegetables furnished varying quantities, up to about one-third of the calcium in the case of diets of southern Negro families.

IRON

Iron is an essential part of the oxygen-carrying hemoglobin of red blood cells, and an activating agent in cellular processes.

Relatively few data dealing with human iron requirements are available because of the difficulties inherent in their determination. Early laboratory evidence (*41*) indicated that about 10 mg a day met the average minimum maintenance requirements of an adult. Adding a 50-percent margin to allow for individual variation in requirement and for differences in the availability of iron in mixed diets, gives an allowance of 15 mg per adult per day. This has been used for a number of years as a guide in planning adequate diets.

Some of the more recent work, however, suggests that this allowance may be unnecessarily generous (*16, 59*). Sherman (*45*) now considers 8 mg daily as probably sufficient for the maintenance of equilibrium, and recommends an additional 50 percent as a margin of safety, making about 12 mg the daily allowance for either men or women. The Technical Commission on Nutrition of the League of Nations (*25*) recommends that diets supply 10 mg of iron daily for the adult man, and larger amounts for women during the child-bearing period, to cover the demands of menstruation, pregnancy, and lactation.

Pending further knowledge regarding the availability to the body of iron in different foods and the iron intake necessary for maintenance (*25, 29*) it seemed wise in this study to suggest an allowance as high as that which had been formerly used.

The few studies of iron requirement in childhood beyond the period of infancy indicate (*1, 14, 26, 38*) that diets furnishing about 0.6 mg of iron per kilogram of body weight a day permit generous retention for growth and development in children under 8 years of age. Less is known of the requirements of older children, but their total requirements are estimated to be close to those of adults.

Taking the allowance of 15 mg per day for the adult as unity, the relative allowances tentatively suggested for persons of different age and sex range from 0.4 to 1.0, as shown in table 33. This scale of requirements was used to determine the number of iron-requirement units to which each family was equivalent.

TABLE 33.—*Iron: Suggested daily allowance and requirement scale*

Sex and age group	Iron allowance	Requirement scale	Sex and age group	Iron allowance	Requirement scale
	Milligrams	*Units*		*Milligrams*	*Units*
Adults, 20 years and over	15	1.0	Boys, 7–8 years; girls, 8–10 years	11	0.7
Boys, 13–19 years	15	1.0	Boys, 4–6 years; girls, 4–7 years	8	.5
Boys, 11–12 years; girls, 14–19 years	13	.9	Children, under 4 years	6	.4
Boys, 9–10 years; girls, 11–13 years	12	.8			

Table 34 presents for regional groups by level of food expenditure, average household size, and average iron content of the diets per person and per iron-requirement unit. In addition, for three levels of food expenditure, the percentage of diets containing specified quantities of iron is given.

The iron content of diets varied with level of food expenditure, and to some extent with region. As the money spent for food increased, the average iron value of the diet rose in every region. Diets of southern white families tended to be of higher iron content than those of other regions, and diets of Negro families in the South richer in iron than those of white families.

When $0.63–$1.24 a person a week was spent for food, diets of southern white families contained an average of 11.6 mg of iron per requirement unit, and of southern Negro families, 12.2 mg a unit a day. These quantities are somewhat less than the suggested allowance of 15 mg, although they probably cover average minimum requirements.

Diets of white families costing $1.25–$1.87 a person a week varied in average iron content from 10.7 mg per unit for families in the Mountain region to 14.2 mg for those in the East South Central region. In no region did the average iron value of the diets reach the 15 mg allowance. For the same expenditure the diets of southern Negro families supplied an average of 16 mg.

TABLE 34.—*Iron content of diets: Averages per day, a person and an iron-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size		Average content		Diets furnishing per unit per day—			
		Persons	Requirement units	Per person	Per requirement unit	Under 10 mg	10.0–14.9 mg	15.0–19.9 mg	20 mg and over
$0.63–$1.24:									
White:	*Number*	*Number*	*Number*	*Milligrams*	*Milligrams*	*Percent*	*Percent*	*Percent*	*Percent*
East South Central	17	5.68	4.87	9.9	11.6	-------	-------	-------	-------
Negro:									
South	84	5.19	4.45	10.5	12.2	-------	-------	-------	-------
$1.25–$1.87:									
White:									
North Atlantic	117	5.76	4.97	9.8	11.3	31	60	9	0
East North Central	70	4.94	4.26	10.3	11.9	16	77	7	0
West North Central	16	5.77	5.15	10.5	11.8	19	56	25	0
South Atlantic	20	5.42	4.66	11.0	12.8	20	60	20	0
East South Central	114	5.38	4.71	12.4	14.2	8	57	26	9
West South Central	11	5.06	4.36	10.0	11.6	46	45	9	0
Mountain	10	5.39	4.68	9.3	10.7	40	60	0	0
Pacific	21	4.43	3.85	11.2	12.8	24	57	19	0
Negro:									
South	83	3.28	3.02	14.7	16.0	7	40	33	20
$1.88–$2.49:									
White:									
North Atlantic	240	4.94	4.41	11.9	13.3	-------	-------	-------	-------
East North Central	119	4.10	3.63	13.0	14.7	-------	-------	-------	-------
West North Central	27	4.63	3.94	12.2	14.3	-------	-------	-------	-------
South Atlantic	34	4.64	4.18	14.6	16.2	-------	-------	-------	-------
East South Central	97	4.29	3.93	14.0	15.4	-------	-------	-------	-------
West South Central	20	3.42	2.96	12.7	14.7	-------	-------	-------	-------
Mountain	32	4.05	3.56	12.3	14.0	-------	-------	-------	-------
Pacific	137	3.89	3.44	12.7	14.3	-------	-------	-------	-------
Negro:									
South	37	2.78	2.66	18.4	19.8	-------	-------	-------	-------
$2.50–$3.12:									
White:									
North Atlantic	253	4.02	3.72	14.2	15.4	0	50	40	10
East North Central	129	3.35	3.07	15.9	17.4	1	30	52	17
West North Central	37	3.36	3.07	14.0	15.4	0	43	57	0
South Atlantic	34	3.52	3.20	16.1	17.7	0	12	71	17
East South Central	54	3.46	3.18	16.8	18.2	0	23	43	34
West South Central	8	3.32	3.10	16.3	17.4	0	0	100	0
Mountain	25	3.57	3.15	13.6	15.4	4	32	48	16
Pacific	132	3.39	3.08	15.6	17.1	0	34	52	14
Negro:									
South	18	2.21	2.20	21.6	21.8	0	5	28	67
$3.13–$3.74:									
White:									
North Atlantic	147	3.36	3.17	16.3	17.3	-------	-------	-------	-------
East North Central	53	2.91	2.74	17.8	19.3	-------	-------	-------	-------
West North Central	32	3.17	2.99	17.0	18.0	-------	-------	-------	-------
South Atlantic	10	3.34	3.16	18.0	19.0	-------	-------	-------	-------
Mountain	9	3.16	3.05	15.8	16.4	-------	-------	-------	-------
Pacific	76	2.79	2.57	18.0	19.1	-------	-------	-------	-------
$3.75–$4.37:									
White:									
North Atlantic	69	2.94	2.83	19.5	20.3	0	6	46	48
East North Central	10	2.51	2.46	21.6	22.0	0	10	20	70
Pacific	37	2.14	2.08	19.3	19.8	0	5	49	46
$4.38 and over:									
White:									
North Atlantic	17	2.84	2.72	20.2	21.0	-------	-------	-------	-------
Pacific	38	1.93	1.92	24.4	24.6	-------	-------	-------	-------

[1] See footnote 1, table 3.

The range of values entering into the averages for regional groups can be seen from the distribution of family diets according to their iron content. Although the diets purchased by white families for \$1.25–\$1.87 a person a week averaged below the suggested allowance of 15 mg of iron in all but the Mountain region, from 7 to 35 percent of the family diets supplied at least this quantity. On the other hand, the diets of 8 to 46 percent of families in different regions furnished less than 10 mg of iron a unit a day.

One-third of the diets costing \$1.25–\$1.87 a person a week in North Atlantic cities contained less than 10 mg a unit a day, and only about one-tenth reached the 15 mg level. In contrast, less than a tenth of the diets obtained for this expenditure by East South Central white families furnished as little as 10 mg of iron per unit daily, and about one-third supplied 15 mg or more. In no other region were the diets of white families so rich in iron. Almost half of the diets of southern Negro families contained less than 15 mg of iron a unit, and 7 percent contained less than 10 mg. About a fifth of the Negro diets were very rich in iron, yielding over 20 mg per unit daily.

When food expenditures were as much as \$1.88–\$2.49 a person a week, the average iron content of diets of white families ranged from 13.3 mg a unit a day in North Atlantic cities to 16.2 mg in South Atlantic cities. Group averages for several regions were below 15 mg of iron a unit a day. For this expenditure, Negro families bought food that furnished an average of 19.8 mg of iron per requirement unit.

Not until food expenditures were \$2.50–\$3.12 a person a week did the average iron content of the diets in every region reach 15 mg a unit a day. But a survey of the diets of individual families at this expenditure level shows that not all of them were as rich as this in iron. The diets of approximately three-quarters of southern white families furnished 15 mg or more of iron, but half of the North Atlantic diets fell short of this quantity. Practically all of the Negro families had diets fully adequate in iron, with two-thirds as high as 20 mg or more a unit a day.

In diets costing \$3.13–\$3.74 a person a week the average iron values ranged from 16.4 to 19.3 mg a unit a day.

In all regions, the principal sources of iron were the lean meat, eggs, mature beans or peas, and green-colored vegetables. The leafy, green vegetables made significant contributions in the case of southern diets. Flours and cereals made varying contributions depending on the proportion of lightly milled varieties selected.

It is estimated that 25 percent of the white families represented by this study obtained diets supplying 14 mg or less of iron a requirement unit a day; 50 percent of the families, 15 mg or less; and 75 percent of them, 17 mg or less. The diets of less than 5 percent failed to furnish as much as 10 mg of iron a unit a day.

VITAMIN A VALUE

Vitamins are organic substances necessary in very small quantities for growth and the maintenance of normal structure and function of body tissue. They differ widely in their chemical nature, in specific functions, and in the quantities in which they are needed by the human body. Those discussed in this circular and some others have been isolated and also prepared from simpler compounds in the chemical laboratory. For these well-known vitamins, it is now possible to state approximately what weight of the pure substance is represented by the biological units which have been employed heretofore as a measure of quantity.

In order to obtain vitamin values for a comprehensive list of foods it was necessary to employ not only data determined directly in terms of International Units but also those expressed in Sherman units and determined prior to the establishment of International Standards of Reference. To arrive at an approximation of the International Unit value of data expressed in Sherman units, the Sherman unit values for vitamin A were divided by 2; the Sherman unit values for vitamin B_1 were divided by 2; and the Sherman unit values for vitamin C were multiplied by 10.

For the convenience of the reader, tables 36–42 present the approximate quantities of pure substance represented by the number of units stated. One International Unit of vitamin A value is furnished by 0.6 microgram of beta-carotene; 1 International Unit of vitamin B_1 by about 3 micrograms of crystalline vitamin B_1 hydrochloride (thiamin); 1 International Unit of vitamin C by 0.05 mg of ascorbic acid, and 1 Sherman unit of riboflavin (vitamin G), by about 3 micrograms of riboflavin.

Vitamin A is essential to normal nutrition at all ages. One of the first symptoms of deficiency is poor visual adaptation to semidarkness. Severe shortages are characterized by xerophthalmia, loss of weight, and a widespread weakening of tissues, especially epithelial tissue.

To meet vitamin A requirements, the body can make use of vitamin A itself or its precursors, such as the carotenes. There is evidence, however, that unit for unit as now measured (International Units), carotene is less effective in supporting normal dark adaptation than is vitamin A from cod-liver oil.

From studies dealing with several species of animals, Guilbert and others (*20*) conclude that vitamin A requirement is related to body weight rather than to energy metabolism, and that the minimum daily requirement of vitamin A to prevent gross night blindness in mammals (cattle, sheep, and swine) is about 25 to 30 micrograms of carotene (about 40 to 50 International Units) per kilogram of body weight, or 6 to 8 micrograms of vitamin A (about 20 to 25 International Units).

Edmund and Clemmesen (*15*) examined the ability to discern differences in brightness of illumination of two matched groups of prisoners—14 receiving the standard prison ration, and 14 others the prison ration supplemented with a daily allowance of one-half liter of milk. In the summer no difference was found between the two groups. However, the control group presented seasonal oscillations during the year which were not shown by those receiving extra milk. From calculations of the average vitamin A content of the daily food of each group, it appears that 20 to 22 International Units of vitamin A value per kilogram of body weight prevented visual disadaptation, as measured by their technique.

Recently Booher, Callison, and Hewston[5] studied the question, making use of a Hecht adaptometer, an instrument by which small differences in a subject's ability to discern light can be measured without involving visual acuity. For five normal men and women they found that maintenance of optimal visual response required from 25 to 56 International Units of vitamin A (averaging about 40 units) per kilogram of body weight, or 43 to 103 (averaging about 70) International Units of carotene. Practically no body storage of vitamin A occurred at these levels of intake.

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[5] Paper presented at the International Physiological Congress, Zurich, Switzerland, August 15–19, 1938.

The relative efficiency of carotene as compared with vitamin A from cod-liver oil for maintaining normal visual response was found by Booher and coworkers to be of the same order of magnitude as reported by Guilbert and others. In ordinary American diets, carotene from plant foods usually supplies 60 to 80 percent of the total vitamin A value. If the carotene in a mixed diet is customarily utilized to about the extent as was the carotene eaten by Booher's experimental subjects, it would appear that such diets should provide per kilogram from 58 to 64 International Units of vitamin A value (preformed vitamin A and carotene) to cover average minimum requirements for maintaining optimal visual response. This level would not provide for the accumulation of a body reserve, nor would it cover minimal requirements for those whose needs are higher than average.

It would appear, therefore, that a 50-percent margin of safety might well be added to average requirements in setting up a mark at which to aim in dietary plans. For a 70-kg man this would amount to at least 6,000 International Units of vitamin A value per day.

At any given age the need for vitamin A appears to be proportional to body weight. But during growth, pregnancy, and lactation, the requirements per unit of body weight are much higher than for the adult man.

Table 35.—*Vitamin A: Suggested daily allowance and requirement scale*

Sex and age group	Vitamin A allowance	Requirement scale	Sex and age group	Vitamin A allowance	Requirement scale
	International Units	*Units*		*International Units*	*Units*
Adults, 20 years and over	6,000	1.00	Boys, 4–6 years; girls, 4–7 years	4,500	0.75
Boys, 11–19 years; girls, 14–19 years	6,000	1.00	Children, under 4 years	4,500	.75
Boys, 7–10 years; girls, 8–13 years	5,400	.90			

An allowance for young children five times as high per unit of body weight as that for the adult man would approximate 4,500 International Units a day for preschool children (*4*). This quantity can be easily supplied by ordinary food, or by two teaspoonfuls of cod-liver oil. Six to eight thousand International Units of vitamin A value can be furnished by ordinary food if great care is taken in its selection. The increased requirements of pregnancy and lactation probably are met by doubling the adult's usual requirement per unit of body weight. This places the figure at about 7,500 International Units a person a day.

The quantities of vitamin A listed in table 35 are a fairly liberal provision. The allowances for children bear the same relation to the adult allowance as in the case of protein. They represent what is likely to appear in a diet otherwise good, but do not include the vitamin value of cod-liver oil or other concentrates which are given, especially to children, and which can easily double or triple the quantity which ordinary food can provide. Taking 6,000 International Units per day, the tentative allowance for the adult man, as unity, the relative allowances for different age groups range from 0.75 to 1.00. These relative allowances were used in computing the number of vitamin A requirement units to which each family was equivalent.

Diets with average vitamin A values as high as the suggested allowances were obtained by groups of families living in the southern cities, even when their expenditures for food were as little as $0.63–$1.24 a person a week. These figures appear in table 36. At each food spending level the average vitamin A values of diets differed from one regional group to another. For families spending $1.25–$1.87 a person a week for food, averages ranged from a low of 2,100 International Units a requirement unit a day for white families in North Atlantic and West South Central cities, to 6,600 for Negro families in southern cities.

High averages do not necessarily reflect generally high levels. For example, at a food-expenditure level of $1.25–$1.87 a person a week, the average vitamin A value of 117 diets of white families in North Atlantic cities was 2,100 International Units a requirement unit a day. Almost 70 percent of the diets furnished less than 2,000 International Units of vitamin A value a requirement unit a day; whereas the top 13 percent furnished more than 4,000 units a requirement unit a day.

Average vitamin A values of diets costing $1.88–$2.49 a person a week were between 2,500 International Units a requirement unit a day for white families in East North Central cities and 6,500 International Units among Negro families in southern cities.

When $2.50–$3.12 a person a week was spent for food, average vitamin A values of diets in every regional group exceeded 3,000 International Units daily per requirement unit. However, as many as 29 percent of the families in the North Atlantic cities obtained fewer than 2,000 International Units a requirement unit a day; whereas only 8 percent of the families in Pacific cities had less than this amount.

With food expenditures above $3.74 a person a week, the diets of each regional group averaged more than 5,000 International Units of vitamin A value a requirement unit a day, and practically every family had more than 2,000 International Units a requirement unit.

With present-day food choices, diets are often fairly low in vitamin A value even when expenditures for food are relatively high. The primary sources of this nutritional factor are the carotene-containing plant products. The carrot, the sweetpotato, and the cheaper of the thin green leaves usually are the most inexpensive sources. A share of the carotene of feeds, yellow corn, green grasses, and hay is transferred by the cow to milk, in part as carotene and in part as vitamin A. Milk, eggs, and other animal products, especially liver and liver oils, are important sources of vitamin A value, but they often are more expensive sources than are the plant foods.

About a third of all of the white families represented by this study obtained diets high enough in vitamin A value to meet the probable minimum requirement for optimal visual adaptation to semidarkness. It is estimated that the lowest 25 percent of the diets furnished 2,000 or less International Units a requirement unit a day, and the lowest 75 percent, less than 4,500 International Units a day. Diets of more than a fifth of the families, however, furnished the liberal allowance of 6,000 or more International Units of vitamin A value per requirement unit each day.

TABLE 36.—*Vitamin A value of diets: Averages per day, a person and a vitamin A-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size		Average vitamin A value		Beta-carotene equivalent of vitamin A value		Diets furnishing per requirement unit per day—				
		Persons	Requirement units	Per person	Per requirement unit	Per person	Per requirement unit	Under 1,000 International Units	1,000–1,999 International Units	2,000–3,999 International Units	4,000–5,999 International Units	6,000 International Units and over
	Number	*Number*	*Number*	*International Units*	*International Units*	*Milligrams*	*Milligrams*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
$0.63–$1.24:												
White:												
East South Central	17	5.68	5.35	3,500	3,700	2.1	2.2	------	------	------	------	------
Negro:												
South	84	5.19	4.89	3,400	3,600	2.0	2.2	------	------	------	------	------
$1.25–$1.87:												
White:												
North Atlantic	117	5.76	5.44	2,000	2,100	1.2	1.3	20	47	20	9	4
East North Central	70	4.94	4.65	2,500	2,600	1.5	1.6	14	40	29	9	8
West North Central	16	5.77	5.52	2,400	2,500	1.4	1.5	0	44	44	6	6
South Atlantic	20	5.42	5.10	2,600	2,800	1.6	1.7	15	30	25	25	5
East South Central	114	5.38	5.11	3,400	3,600	2.0	2.2	5	34	26	13	22
West South Central	11	5.06	4.78	2,000	2,100	1.2	1.3	18	55	9	9	9
Mountain	10	5.39	5.09	3,400	3,600	2.0	2.2	0	20	50	10	20
Pacific	21	4.43	4.19	3,100	3,300	1.9	2.0	0	28	48	5	19
Negro:												
South	83	3.28	3.18	6,400	6,600	3.8	4.0	10	24	17	7	42
$1.88–$2.49:												
White:												
North Atlantic	240	4.94	4.72	2,600	2,800	1.6	1.7	------	------	------	------	------
East North Central	119	4.10	3.90	2,400	2,500	1.4	1.5	------	------	------	------	------
West North Central	27	4.63	4.35	2,700	2,900	1.6	1.7	------	------	------	------	------
South Atlantic	34	4.64	4.46	4,200	4,300	2.5	2.6	------	------	------	------	------
East South Central	97	4.29	4.14	4,500	4,600	2.7	2.8	------	------	------	------	------
West South Central	20	3.42	3.22	2,800	3,000	1.7	1.8	------	------	------	------	------
Mountain	32	4.05	3.84	4,000	4,200	2.4	2.5	------	------	------	------	------
Pacific	137	3.89	3.70	3,700	3,900	2.2	2.3	------	------	------	------	------
Negro:												
South	37	2.78	2.73	6,400	6,500	3.8	3.9	------	------	------	------	------
$2.50–$3.12:												
White:												
North Atlantic	253	4.02	3.90	3,300	3,400	2.0	2.0	1	28	45	10	16
East North Central	129	3.35	3.24	3,400	3,500	2.0	2.1	0	26	46	12	16
West North Central	37	3.36	3.25	3,600	3,800	2.2	2.3	0	24	52	11	13
South Atlantic	34	3.52	3.39	5,300	5,500	3.2	3.3	0	15	29	24	32
East South Central	54	3.46	3.35	6,000	6,200	3.6	3.7	0	9	34	15	42
West South Central	8	3.32	3.24	5,700	5,800	3.4	3.5	0	12	25	0	63
Mountain	25	3.57	3.38	3,600	3,800	2.2	2.3	0	20	52	12	16
Pacific	132	3.39	3.26	4,300	4,500	2.6	2.7	0	8	52	18	22
Negro:												
South	18	2.21	2.21	8,000	8,000	4.8	4.8	6	22	28	0	44
$3.13–$3.74:												
White:												
North Atlantic	147	3.36	3.29	4,100	4,200	2.5	2.5	------	------	------	------	------
East North Central	53	2.91	2.83	2,900	3,000	1.7	1.8	------	------	------	------	------
West North Central	32	3.17	3.10	4,000	4,100	2.4	2.5	------	------	------	------	------
South Atlantic	10	3.34	3.27	7,100	7,300	4.3	4.4	------	------	------	------	------
Mountain	9	3.16	3.14	3,700	3,800	2.2	2.3	------	------	------	------	------
Pacific	76	2.79	2.67	5,300	5,400	3.2	3.2	------	------	------	------	------
$3.75–$4.37:												
White:												
North Atlantic	69	2.94	2.90	5,800	5,900	3.5	3.5	0	4	48	18	30
East North Central	10	2.51	2.50	5,000	5,100	3.0	3.1	0	0	30	40	30
Pacific	37	2.14	2.12	5,700	5,800	3.4	3.5	0	3	46	16	35
$4.38 and over:												
White:												
North Atlantic	17	2.84	2.79	7,100	7,200	4.3	4.3	------	------	------	------	------
Pacific	38	1.93	1.93	8,200	8,300	4.0	5.0	------	------	------	------	------

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[1] See footnote 1, table 3.

VITAMIN B_1

Vitamin B_1 is essential to the intermediary metabolism of carbohydrate. It plays an important part in the maintenance of appetite and normal digestive function. Chemical identification and synthesis of the vitamin were accomplished in 1936, and crystalline salts, as vitamin B_1 hydrochloride (thiamin), are now available (*68*).

The requirement of vitamin B_1 appears to be related to body size and energy metabolism. From laboratory data on the quantity needed to maintain appetite in animals of different species—the rat, mouse, pigeon, and dog—Cowgill (*10*) deduced that a 70-kg man, using about 3,000 calories a day, needs about 300 International Units of vitamin B_1 a day. This quantity will insure freedom from beriberi, but how wide a margin of safety it represents is not known. More research is needed on this point. It is generally agreed that requirements are relatively higher during childhood, pregnancy, and especially during lactation.

The vitamin B_1 allowances suggested in table 37 for different individuals bear the same relation to the allowance for the moderately active man as do the energy allowances, inasmuch as vitamin B_1 requirement is related to energy metabolism. The scale of relatives shown in table 37 was used for computing the number of vitamin B_1-requirement units to which each family was equivalent.

TABLE 37.—*Vitamin B_1: Suggested daily allowance and requirement scale*

Sex and age group	Allowance of—		Requirement scale
	Vitamin B_1	Thiamin	
	International Units	*Milligrams*	*Units*
Adults, 20 years and over	500	1.5	1.00
Boys, 16–19 years	600	1.8	1.20
Boys, 13–15 years	500	1.5	1.00
Boys, 11–12 years; girls, 14–19 years	420	1.3	.83
Boys, 9–10 years; girls, 11–13 years	400	1.2	.80
Boys, 7–8 years; girls, 8–10 years	350	1.1	.70
Boys, 4–6 years; girls, 4–7 years	250	.8	.50
Children, under 4 years	200	.6	.40

Table 38 gives for regional groups at six levels of food expenditure, the number of families, average household size, and the average vitamin B_1 content of diets per capita and per vitamin B_1-requirement unit. In addition, a percentage distribution of the families according to the vitamin B_1 content of their diets is given for three levels of expenditure for food.

The average vitamin B_1 content of the diets of these families shows a gradual increase with rising weekly expenditures for food. Expenditures of \$0.63–\$1.24 a person a week bought diets containing from 280 to 330 International Units of vitamin B_1 a requirement unit a day, respectively, in the case of white and Negro families in southern cities. Less than a tenth of the white families of these cities, but about one-third of the Negro families, were spending these amounts for food. The average vitamin B_1 content of their diets was scarcely two-thirds of the fairly liberal suggested allowance.

TABLE 38.—*Vitamin B_1 content of diets: Averages per day, a person and a vitamin B_1-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size		Average content				Diets furnishing per requirement unit per day—				
				Vitamin B_1		Thiamin						
		Persons	Requirement units	Per person	Per requirement unit	Per person	Per requirement unit	Under 240 International Units	240–399 International Units	400–599 International Units	600–799 International Units	800 International Units and over
	Number	*Number*	*Number*	*International Units*	*International Units*	*Milligrams*	*Milligrams*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
$0.63–$1.24:												
White:												
East South Central	17	5.68	4.85	240	280	0.7	0.8	-----	-----	-----	-----	-----
Negro:												
South	84	5.19	4.47	280	330	.8	1.0	-----	-----	-----	-----	-----
$1.25–$1.87:												
White:												
North Atlantic	117	5.76	5.04	290	340	.9	1.0	22	59	17	2	0
East North Central	70	4.94	4.28	350	400	1.1	1.2	12	55	30	3	0
West North Central	16	5.77	5.22	360	390	1.1	1.1	6	57	31	0	6
South Atlantic	20	5.42	4.66	370	430	1.1	1.3	0	40	60	0	0
East South Central	114	5.38	4.70	420	420	1.3	1.3	4	54	37	5	0
West South Central	11	5.06	4.35	290	340	.9	1.0	18	63	18	0	0
Mountain	10	5.39	4.68	290	330	.9	1.0	20	60	20	0	0
Pacific	21	4.43	3.81	380	450	1.1	1.4	5	38	52	5	0
Negro:												
South	83	3.28	3.01	440	480	1.3	1.4	6	33	48	11	2
$1.88–$2.49:												
White:												
North Atlantic	240	4.94	4.42	380	420	1.1	1.3	-----	-----	-----	-----	-----
East North Central	119	4.10	3.64	440	500	1.3	1.5	-----	-----	-----	-----	-----
West North Central	27	4.63	3.93	450	530	1.4	1.6	-----	-----	-----	-----	-----
South Atlantic	34	4.64	4.19	460	510	1.4	1.6	-----	-----	-----	-----	-----
East South Central	97	4.29	3.93	450	490	1.4	1.5	-----	-----	-----	-----	-----
West South Central	20	3.42	2.94	400	470	1.2	1.4	-----	-----	-----	-----	-----
Mountain	32	4.05	3.56	390	440	1.2	1.3	-----	-----	-----	-----	-----
Pacific	137	3.89	3.44	420	480	1.3	1.4	-----	-----	-----	-----	-----
Negro:												
South	37	2.78	2.66	580	600	1.7	1.8	-----	-----	-----	-----	-----
$2.50–$3.12:												
White:												
North Atlantic	253	4.02	3.75	460	500	1.4	1.5	0	30	56	13	1
East North Central	129	3.35	3.07	560	610	1.7	1.8	1	11	56	27	5
West North Central	37	3.36	3.07	490	540	1.5	1.6	0	22	51	24	3
South Atlantic	34	3.52	3.20	530	580	1.6	1.7	0	9	68	14	9
East South Central	54	3.46	3.19	570	610	1.7	1.8	0	9	49	32	10
West South Central	8	3.32	3.09	540	580	1.6	1.7	0	12	50	38	0
Mountain	25	3.57	3.16	430	490	1.3	1.5	0	36	52	12	0
Pacific	132	3.39	3.07	490	540	1.5	1.6	0	22	58	15	5
Negro:												
South	18	2.21	2.19	710	720	2.1	2.2	0	0	22	72	6
$3.13–$3.74:												
White:												
North Atlantic	147	3.36	3.19	550	580	1.7	1.7	-----	-----	-----	-----	-----
East North Central	53	2.91	2.74	640	690	1.9	2.1	-----	-----	-----	-----	-----
West North Central	32	3.17	2.99	650	690	2.0	2.1	-----	-----	-----	-----	-----
South Atlantic	10	3.34	3.16	700	740	2.1	2.2	-----	-----	-----	-----	-----
Mountain	9	3.16	3.04	440	460	1.3	1.4	-----	-----	-----	-----	-----
Pacific	76	2.79	2.56	560	580	1.7	1.7	-----	-----	-----	-----	-----
$3.75–$4.37:												
White:												
North Atlantic	69	2.94	2.84	650	680	2.0	2.0	0	4	48	35	13
East North Central	10	2.51	2.45	780	790	2.3	2.4	0	10	10	60	20
Pacific	37	2.14	2.08	620	640	1.9	1.9	0	5	54	33	8
$4.38 and over:												
White:												
North Atlantic	17	2.84	2.74	680	710	2.0	2.1	-----	-----	-----	-----	-----
Pacific	38	1.93	1.92	760	770	2.3	2.3	-----	-----	-----	-----	-----

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[1] See footnote 1, table 3.

At a higher level of expenditure for food, \$1.25–\$1.87 a person a week, the average vitamin B_1 content of the diets of different regional groups ranged from 330 to 480 International Units a requirement unit a day. In the different regional groups from two-fifths to as many as four-fifths of the families procured diets furnishing less than 400 International Units of vitamin B_1 a requirement unit a day.

When weekly food expenditures amounted to \$1.88–\$2.49 a person, the average daily vitamin B_1 content of the diets ranged from 420 to 600 International Units a requirement unit. Five of the nine regional groups of families at this food-spending level had diets that averaged less than the suggested allowance of 500 International Units of vitamin B_1 a unit a day.

It was not until weekly food expenditures reached \$2.50–\$3.12 a person that most groups of families obtained diets averaging more than 500 International Units a requirement unit a day. The range in averages for different groups of families spending this much for food was from 490 to 720 International Units. From about half to two-thirds of the white families spending \$2.50–\$3.12 a person a week obtained diets supplying daily from 400 to 600 International Units of vitamin B_1 a requirement unit a day, and from one-eighth to two-fifths of the families, 600 International Units and more of vitamin B_1 a unit a day. Over three-fourths of the Negro families at this spending level obtained diets with 600 or more International Units of vitamin B_1 a requirement unit a day.

Family food supplies costing more than \$3.12 a person a week averaged from 460 to 740 International Units a requirement unit a day. When \$3.75–\$4.37 weekly was spent for each person's food, all but 5 to 10 percent of the families obtained diets containing 400 International Units or more of vitamin B_1 per requirement unit per day.

Vitamin B_1 is fairly widely distributed in natural foods, but few foods are very rich sources. Among the most important are pork muscle and whole-grain products. Milk, vegetables, and fruits also contribute significant quantities.

Of the entire number of white families participating in this survey, it is estimated that the 25 percent choosing diets lowest in vitamin B_1 obtained less than 400 International Units a requirement unit daily and 75 percent, 600 or less International Units a requirement unit a day. About 10 percent selected food furnishing less than 300 International Units a requirement unit a day and about half of the families obtained 500 or more International Units of vitamin B_1 a requirement unit a day.

There is probably little danger of serious vitamin B_1 deficiencies if individuals regularly select a goodly share of their needed calories from foods that have not been artificially refined or depleted of their vitamin B_1 by the processes of preparation. The relatively high vitamin B_1 value of diets of southern Negro families, even when weekly food expenditures were low, was due to the fact that they consumed large quantities of whole corn meal, sweetpotatoes, and pork.

ASCORBIC ACID (VITAMIN C)

Ascorbic acid (vitamin C) is essential to the formation and maintenance of intercellular substances needed for the integrity of certain body tissues. A shortage is associated with defective intercellular substances in teeth, bones, cartilage, connective tissue, and probably in blood vessels. Secondary to such defects there is likely to be increased susceptibility to infection. Vitamin C may also be of fundamental importance in tissue respiration.

The ascorbic acid requirement appears to be related both to the rate of energy metabolism and to size of body. From the available data it appears that approximately 25–30 mg of ascorbic acid (500–600 International Units of vitamin C) daily is about a maintenance allowance for an adult (*19, 21, 60*), and that two or three times this quantity, 50 to 90 mg of ascorbic acid (*49*), is needed to keep the body saturated. It is not known, however, that saturation is essential to an optimal nutritive state. Per unit of body weight, requirements are higher during childhood, pregnancy, and lactation.

There is some evidence that the daily needs of young children are two-thirds to three-fourths as high as those of adults (*60*). Relative to the needs of the adult, the ascorbic acid requirements of childhood appear to be greater per unit of body weight than their energy needs. In pregnancy and lactation a woman's usual allowance probably should be doubled.

Table 39 shows the allowances tentatively suggested for satisfactory diets for persons of different age groups. Taking 75 mg of ascorbic acid (1,500 International Units of vitamin C) as unity, the allowances for children relative to those of the adult man range from 0.7 to 1.0. These relatives were used in computing the number of ascorbic acid requirement units to which family members were equivalent.

TABLE 39.—*Vitamin C (ascorbic acid): Suggested daily allowance and requirement scale*

Sex and age group	Allowance of— Vitamin C	Allowance of— Ascorbic acid	Requirement scale
	International Units	*Milligrams*	*Units*
Adults, 20 years and over	1, 500	75	1. 0
Boys, 16–19 years	1, 800	90	1. 2
Boys, 13–15 years	1, 500	75	1. 0
Boys, 11–12 years; girls, 14–19 years	1, 350	68	. 9
Boys, 9–10 years; girls, 11–13 years	1, 200	60	. 8
Boys, 4–8 years; girls, 4–10 years	1, 000	50	. 7
Children, under 4 years	1, 000	50	. 7

The ascorbic acid content of the purchased food of families in different regions at each of several food-spending levels is shown in table 40. The averages for every group exceed the maintenance level of 25–30 mg of ascorbic acid per requirement unit daily. For five of the nine groups of families spending $1.25–$1.87 a person a week for food, the average ascorbic acid content of the diet was at least 50 mg daily per unit. As many as 45 percent of the North Atlantic families bought food supplying less than 37.5 mg of ascorbic acid a unit a day; whereas none of the Pacific city families had diets so poor.

With expenditures for food at $2.50–$3.12 a person a week, the average ascorbic acid content of diets ranged from 70 to 93 mg a unit a day for the several groups of families. Many families in each group bought food furnishing more than 75 mg of ascorbic acid per unit daily. The percentages ranged from 37 in the case of the North Atlantic group, to 70 for the Pacific.

TABLE 40.—*Ascorbic acid (vitamin C) content of diets: Averages per day, a person and an ascorbic acid-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size		Average content				Diets furnishing per unit per day				
		Persons	Requirement units	Per person		Per requirement unit		Under 25.0 mg	25.0–37.4 mg	37.5–49.9 mg	50.0–74.9 mg	75.0 mg and over
$0.63–$1.24:	*Number*	*Number*	*Number*	*International Units*	*Milligrams*	*International Units*	*Milligrams*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
White:												
East South Central	17	5.68	5.15	800	40.0	870	43.5	-----	-----	-----	-----	-----
Negro:												
South	84	5.19	4.70	610	30.5	670	33.5	-----	-----	-----	-----	-----
$1.25–$1.87:												
White:												
North Atlantic	117	5.76	5.32	760	38.0	820	41.0	10	35	27	24	4
East North Central	70	4.94	4.51	840	42.0	930	46.5	9	31	27	29	4
West North Central	16	5.77	5.46	850	42.5	900	45.0	0	38	25	37	0
South Atlantic	20	5.42	4.92	900	45.0	1,000	50.0	10	20	30	30	10
East South Central	114	5.38	4.94	920	46.0	1,000	50.0	10	16	29	35	10
West South Central	11	5.06	4.54	540	27.0	610	30.5	55	18	18	9	0
Mountain	10	5.39	4.91	1,190	59.5	1,310	65.5	0	0	10	60	30
Pacific	21	4.43	4.02	1,250	62.5	1,380	69.0	0	0	24	38	38
Negro:												
South	83	3.28	3.11	1,090	54.5	1,150	57.5	12	11	24	29	24
$1.88–$2.49:												
White:												
North Atlantic	240	4.94	4.59	1,060	53.0	1,140	57.0	-----	-----	-----	-----	-----
East North Central	119	4.10	3.81	1,050	52.5	1,150	57.5	-----	-----	-----	-----	-----
West North Central	27	4.63	4.16	1,050	52.5	1,160	58.0	-----	-----	-----	-----	-----
South Atlantic	34	4.64	4.32	1,260	63.0	1,360	68.0	-----	-----	-----	-----	-----
East South Central	97	4.29	4.05	1,270	63.5	1,340	67.0	-----	-----	-----	-----	-----
West South Central	20	3.42	3.09	810	40.5	900	45.0	-----	-----	-----	-----	-----
Mountain	32	4.05	3.75	1,640	82.0	1,760	88.0	-----	-----	-----	-----	-----
Pacific	137	3.89	3.59	1,420	71.0	1,540	77.0	-----	-----	-----	-----	-----
Negro:												
South	37	2.78	2.70	1,190	59.5	1,220	61.0	-----	-----	-----	-----	-----
$2.50–$3.12:												
White:												
North Atlantic	253	4.02	3.84	1,340	67.0	1,410	70.5	0	6	11	46	37
East North Central	129	3.35	3.16	1,380	69.0	1,470	73.5	2	7	9	33	49
West North Central	37	3.36	3.17	1,320	66.0	1,400	70.0	0	0	5	54	41
South Atlantic	34	3.52	3.31	1,360	68.0	1,440	72.0	0	6	15	38	41
East South Central	54	3.46	3.29	1,610	80.5	1,690	84.5	2	6	6	32	54
West South Central	8	3.32	3.18	1,410	70.5	1,470	73.5	0	0	0	38	62
Mountain	25	3.57	3.32	1,550	77.5	1,670	83.5	0	0	12	32	56
Pacific	132	3.39	3.17	1,740	87.0	1,860	93.0	2	3	3	22	70
Negro:												
South	18	2.21	2.20	1,700	85.0	1,700	85.0	11	0	11	22	56
$3.13–$3.74:												
White:												
North Atlantic	147	3.36	3.22	1,660	83.0	1,740	87.0	-----	-----	-----	-----	-----
East North Central	53	2.91	2.79	1,490	74.5	1,560	78.0	-----	-----	-----	-----	-----
West North Central	32	3.17	3.04	1,830	91.5	1,900	95.0	-----	-----	-----	-----	-----
South Atlantic	10	3.34	3.20	2,050	102.5	2,140	107.0	-----	-----	-----	-----	-----
Mountain	9	3.16	3.08	1,590	79.5	1,630	81.5	-----	-----	-----	-----	-----
Pacific	76	2.79	2.62	2,050	102.5	2,140	107.0	-----	-----	-----	-----	-----
$3.75–$4.37:												
White:												
North Atlantic	69	2.94	2.86	1,940	97.0	2,000	100.0	0	1	3	28	68
East North Central	10	2.51	2.46	2,110	105.5	2,150	107.5	0	10	0	10	80
Pacific	37	2.14	2.09	2,290	114.5	2,350	117.5	0	0	0	11	89
$4.38 and over:												
White:												
North Atlantic	17	2.84	2.77	1,860	93.0	1,900	95.0	-----	-----	-----	-----	-----
Pacific	38	1.93	1.92	3,010	150.5	3,020	151.0	-----	-----	-----	-----	-----

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[1] See footnote 1, table 3.

With weekly food expenditures of $3.75–$4.37 a person, all of the averages for ascorbic acid exceeded 100 mg per unit daily, and from 68 to 89 percent of the families in the three regional groups had food furnishing 75 mg or more of ascorbic acid a unit a day.

Since the figures for vitamin content of diets refer in the main to uncooked products, the values just discussed for ascorbic acid, which is water soluble and tends to be destroyed by storage and oxidation, are probably higher than those found in the food actually consumed. The food as purchased by about 10 percent of the families of white employed workers studied contained less than 37 mg of ascorbic acid a requirement unit a day and by somewhat less than half of the families, 75 mg of ascorbic acid or more a requirement unit a day. In view of the possible destruction of ascorbic acid in the processes of food preparation it seems safe to say that the diets of many families failed to furnish optimal quantities.

Most of the ascorbic acid of the diets was furnished by vegetables and fruits. Potatoes, leafy and green-colored vegetables, tomatoes and fruits, particularly the citrus fruits, are the best sources. Eating some raw fruits or vegetables every day helps to insure an adequate intake.

RIBOFLAVIN

Riboflavin (vitamin G) is required for the production of an important oxidative enzyme involved in cell respiration (*3*). It appears to be formed primarily in the green leaves of growing plants and to remain there in higher concentration than elsewhere in the plant. In addition to green and leafy vegetables, good sources are egg yolk and milk, which retains riboflavin even after pasteurization, drying, partial evaporation, and canning. Liver and other organs and muscle meats are also satisfactory.

TABLE 41.—*Riboflavin: Suggested daily allowance and requirement scale*

Sex and age group	Riboflavin allowance		Requirement scale
	Sherman units	*Milligrams*	*Units*
Adults, 20 years and over	600	1. 8	1. 00
Boys, 11–19 years; girls, 14–19 years	600	1. 8	1. 00
Boys, 7–10 years; girls, 8–13 years	540	1. 6	. 90
Boys, 4–6 years; girls, 4–7 years	450	1. 3	. 75
Children, under 4 years	450	1. 3	. 75

Since many foods contain riboflavin, some fairly abundantly, there is little danger of shortage in well-balanced diets. Not much is known about the human need for riboflavin (*48*). The allowances shown in table 41 are based largely upon the quantities found in diets composed of natural food materials, and known to be well adapted to good growth in children and the maintenance of a good state of nutrition in adults. Whether or not they represent optimal quantities is not known. The allowances range from 450 Sherman units, about 1.3 mg, of riboflavin for children under 4 years of age, to 600 units for adults and older children, or, relative to the allowance for the adult as unity, from 0.75 to 1.00. The scale of relatives shown in table 41 has been used in estimating the number of riboflavin requirement units to which various families were equivalent.

Table 42.—*Riboflavin content of diets: Averages per day, a person and a riboflavin-requirement unit, by level of food expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Average household size		Average content				Diets furnishing per requirement unit per day—				
		Persons	Requirement units	Per person		Per requirement unit		Under 300 Sherman units	300–499 Sherman units	500–749 Sherman units	750–999 Sherman units	1,000 Sherman units and over
$0.63–$1.24:	*Number*	*Number*	*Number*	*Sherman units*	*Milligrams*	*Sherman units*	*Milligrams*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
White:												
East South Central	17	5.68	5.35	300	0.9	320	1.0	------	------	------	------	------
Negro:												
South	84	5.19	4.89	300	.9	320	1.0	------	------	------	------	------
$1.25–$1.87:												
White:												
North Atlantic	117	5.76	5.38	440	1.3	470	1.4	2	59	38	1	0
East North Central	70	4.94	4.65	450	1.4	470	1.4	6	58	34	2	0
West North Central	16	5.77	5.52	510	1.5	530	1.6	0	31	69	0	0
South Atlantic	20	5.42	5.10	430	1.3	460	1.4	5	60	35	0	0
East South Central	114	5.38	5.11	460	1.4	480	1.4	4	58	33	5	0
West South Central	11	5.06	4.78	420	1.3	450	1.4	0	73	18	9	0
Mountain	10	5.39	5.09	480	1.4	500	1.5	0	70	20	10	0
Pacific	21	4.43	4.19	520	1.6	540	1.6	0	48	48	4	0
Negro:												
South	83	3.28	3.18	500	1.5	510	1.5	16	40	36	3	5
$1.88–$2.49:												
White:												
North Atlantic	240	4.34	4.72	560	1.7	580	1.7	------	------	------	------	------
East North Central	119	4.10	3.90	570	1.7	610	1.8	------	------	------	------	------
West North Central	27	4.63	4.35	610	1.8	650	2.0	------	------	------	------	------
South Atlantic	34	4.64	4.46	640	1.9	660	2.0	------	------	------	------	------
East South Central	97	4.29	4.14	600	1.8	620	1.9	------	------	------	------	------
West South Central	20	3.42	3.22	570	1.7	610	1.8	------	------	------	------	------
Mountain	32	4.05	3.84	620	1.9	660	2.0	------	------	------	------	------
Pacific	137	3.89	3.70	640	1.9	680	2.0	------	------	------	------	------
Negro:												
South	37	2.78	2.73	660	1.9	650	2.0	------	------	------	------	------
$2.50–$3.12:												
White:												
North Atlantic	253	4.02	3.89	680	2.0	700	2.1	0	5	59	33	3
East North Central	129	3.35	3.24	710	2.1	740	2.2	0	5	58	35	2
West North Central	37	3.36	3.25	680	2.0	700	2.1	0	8	59	30	3
South Atlantic	34	3.52	3.39	660	2.0	690	2.1	0	6	62	32	0
East South Central	54	3.46	3.35	810	2.4	830	2.5	0	6	38	26	30
West South Central	8	3.32	3.24	710	2.1	730	2.2	0	13	50	25	12
Mountain	25	3.57	3.38	710	2.1	750	2.2	0	8	44	32	16
Pacific	132	3.39	3.26	720	2.2	750	2.2	0	4	52	39	5
Negro:												
South	18	2.21	2.21	810	2.4	810	2.4	0	0	50	22	28
$3.13–$3.74:												
White:												
North Atlantic	147	3.36	3.29	800	2.4	810	2.4	------	------	------	------	------
East North Central	53	2.91	2.83	790	2.4	820	2.5	------	------	------	------	------
West North Central	32	3.17	3.10	810	2.4	820	2.5	------	------	------	------	------
South Atlantic	10	3.34	3.27	870	2.6	880	2.6	------	------	------	------	------
Mountain	9	3.16	3.14	760	2.3	760	2.3	------	------	------	------	------
Pacific	76	2.79	2.67	850	2.6	870	2.6	------	------	------	------	------
$3.75–$4.37:												
White:												
North Atlantic	69	2.94	2.89	940	2.8	960	2.8	0	0	12	55	33
East North Central	10	2.51	2.50	990	3.0	1,000	3.0	0	0	10	20	70
Pacific	37	2.14	2.12	890	2.7	900	2.7	0	0	11	65	24
$4.38 and over:												
White:												
North Atlantic	17	2.84	2.79	1,060	3.2	1,080	3.2	------	------	------	------	------
Pacific	38	1.93	1.93	1,140	3.4	1,140	3.4	------	------	------	------	------

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[1] See footnote 1, table 3.

Table 42 shows the number of families in groups classified by region and level of expenditure for food, average household size, and the average riboflavin content of the diets per capita and per requirement unit. At three food expenditure levels, the distribution of the families according to the riboflavin content of their diets is given. As the cash outlay for food increased, the diets were correspondingly richer in riboflavin. Furthermore, there was remarkable uniformity in the averages for different regional groups spending the same amount of money for food.

In the South, the diets of white and Negro families spending $0.63–$1.24 a person a week for food furnished an average of 320 Sherman units or 1.0 mg of riboflavin a requirement unit a day. This is only about half of the allowance proposed for adequate diets.

When the weekly food expenditure was $1.25–$1.87 a person, the averages for different regional groups ranged from 450 to 540 Sherman units of riboflavin a requirement unit a day. At this expenditure level, only a very few of the individual diets furnished less than 300 or more than 750 Sherman units a requirement unit.

Diets costing $1.88–$2.49 a person a week averaged 600 Sherman units or more per requirement unit in all but the North Atlantic group, for which the average was 580 units a day.

The average quantities of riboflavin in diets costing $2.50–$3.12 a person a week exceeded the allowance suggested as adequate. For the various regional groups, average values ranged from 690 to 830 Sherman units per requirement unit daily. But not all families obtained such large quantities of riboflavin. The diets of from 4 to 13 percent of the white families in different regions furnished less than 500 Sherman units per requirement unit daily and between 38 and 62 percent of the families, 500 to 749 Sherman units per requirement unit.

Higher food expenditures resulted in still higher averages for each group. When as much as $3.75–$4.37 a week a person was spent for food, the riboflavin content of the diets was 50 percent or more above the suggested allowance, and averaged from 900 to 1,000 Sherman units of riboflavin a unit a day. Only 10 to 12 percent of the diets furnished less than 750 Sherman units.

Of the white families represented by this study, the quarter whose diets were poorest in riboflavin obtained less than 550 Sherman units a requirement unit a day. Almost a quarter, however, obtained 900 or more Sherman units a requirement unit a day, while over 80 percent obtained 500 or more. Only about 1 percent of the diets furnished less than 300 Sherman units a requirement unit a day. Thus in the light of present knowledge, riboflavin appears to be fairly well supplied in average diets of families of white employed workers.

PELLAGRA-PREVENTIVE VALUE

While some investigators consider that pellagra is due to a bacterial infection, the views more generally accepted are that it is due to a dietary deficiency or to a dietary deficiency with a superimposed infection. The classic clinical picture probably registers a deficiency of more than one nutritional factor, but nicotinic acid, which is giving striking therapeutic results in the treatment of the disease, may prove to be a specific pellagra-preventive vitamin or provitamin (*40*).

Goldberger, Wheeler, and others of the United States Public Health Service have determined the approximate pellagra-preventive value of a number of important food materials, both from studies on human subjects and through their work on dogs with blacktongue, the analogue of pellagra. A summary of this work has been compiled by

Sebrell (*39*). Some foods in the quantities tested furnished only partial protection, and many vegetables and fruits are too poor in preventive value to serve alone as an adequate source in the quantities which ordinarily can be eaten. Nevertheless even relatively poor or fair sources can contribute their bit to protection when included in a mixed diet.

About one-half pound of muscle meat a person a day, a quart of milk, or a pound of certain of the green-colored vegetables has been found to afford protection to a person receiving a basic diet composed so largely of nonprotective foods that without the supplement, pellagra would appear.

The average spring food supply of a group of low-income farm families incurring pellagra was found (*53*) to include less than one-fifth of a cup of milk, less than 3 ounces of succulent vegetables and fruits, and less than 3 ounces of lean meat, fish, or eggs a person a day. The most generous estimate of the pellagra-preventive value of this diet indicates that it affords only about half of the preventive value that the tests of the Public Health Service show are necessary to insure protection against the disease. On the other hand, in the same community, farm families who did not incur pellagra, consumed an average of 2¼ cups of milk, about 3 ounces of fruit and succulent vegetables, and 3 ounces of lean meat, fish, and eggs a person a day. These quantities yield somewhat more protection than is absolutely necessary as estimated from the figures of the Public Health Service.

By assigning a value of 100 percent to the approximate quantity of any food material that tests have shown would alone furnish the preventive substance needed daily, a rough estimate of the pellagra-preventive value of diets can be obtained. Table 43 shows the relative pellagra-preventive values of diets of families in different regions at six levels of expenditure for food. Diets purchased for $1.25 or more a person a week tended to furnish more than enough of pellagra-preventive foods needed to avoid incurring the disease. But when less was spent for food, some of the diets failed to include as much pellagra-preventive food as is necessary.

TABLE 43.—*Pellagra-preventive value: Percentage of a safe allowance*[1] *furnished in diets, by level of food expenditure, color of family, and region*

Color of family and region	Percentage of allowance found in diets costing[2] a person a week—					
	$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37
White:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
North Atlantic		120	150	190	220	270
East North Central		110	150	190	210	290
East South Central	90	120	160	210		
Pacific		140	170	200	230	270
Negro:						
South	90	130	180	240		

[1] The amount found in certain quantities of natural food products which if taken each day as a supplement to pellagra-producing diet will prevent the disease.

[2] See footnote 1, table 3.

The food of southern families spending $0.63–$1.24 a person a week included an average of 90 percent of the quantity of pellagra-preventive food judged to be a safe allowance. The diets of about 70 percent of the white families in this group fell short of the needed protection. The diets of 12 percent included only half or less of a safe allowance of protective foods. About 60 percent of the Negro families had food which was deficient in pellagra-preventive value—2 percent seriously so, since their food supplied less than half as much of the protective foods as is known to insure against disease.

When $1.25–$1.87 a person a week was spent for food, the average pellagra-preventive value of the diets was from 10 to 40 percent above the minimum quantity known to be protective. Ninety percent or more of the southern families in this food-spending group had diets which probably were fully pellagra-preventive. At higher levels of expenditure for food, the pellagra-preventive value of the diets averaged from 50 percent to well over 100 percent above the level considered necessary to insure protection against the disease.

Foods that have been shown by tests to be good sources of the pellagra-preventive factor include milk, lean muscle meats, liver, salmon, collards, kale, green peas, turnip greens, and peanut meal. It is the opinion of most nutrition workers that, in spite of the importance of such potent materials as yeast or nicotinic acid in the treatment of pellagra, the disease can only be effectively controlled by establishing dietary habits that will insure a sufficient intake of the pellagra-preventive factor in the daily food.

SUMMARY OF NUTRITIVE VALUE

Figure 4 summarizes for five regional groups the average nutritive value of the food purchased by families spending different amounts for this item. The effect of rising expenditures for food on nutritive content can be seen region by region, and also differences in the nutritive level from one region to another.

EFFECT OF SEASONAL TRENDS IN CONSUMPTION ON NUTRITIVE VALUE

The figures showing the average nutritive value of diets of families in North Atlantic, East South Central, and Pacific cities were examined to see whether any seasonal differences were apparent. In general, for the diets recorded in different seasons the averages were very similar at any one spending level, as is shown in tables 66 and 67. This is particularly true of the average values for calories, protein, phosphorus, and riboflavin which, in most cases, vary less than 10 percent from lowest to highest values. The greatest variability is found in vitamin A values.

Seasonal differences were judged to be significant when highest or lowest average values for any regional group appeared consistently at each level of expenditure. Only those levels of expenditure at which there were data for all four seasons were considered.

At each of four spending levels, the summer diets of North Atlantic families were poorer than those of other seasons in protein and iron, but richer in ascorbic acid. This reflects a slightly lowered consumption of meat in summer and a relatively high consumption of fruits and vegetables.

At each of three spending levels, winter diets of East South Central families were higher in iron than at other seasons, and summer diets were lowest in both iron and vitamin A. The explanation probably lies in the selection of vegetables in different seasons. In summer,

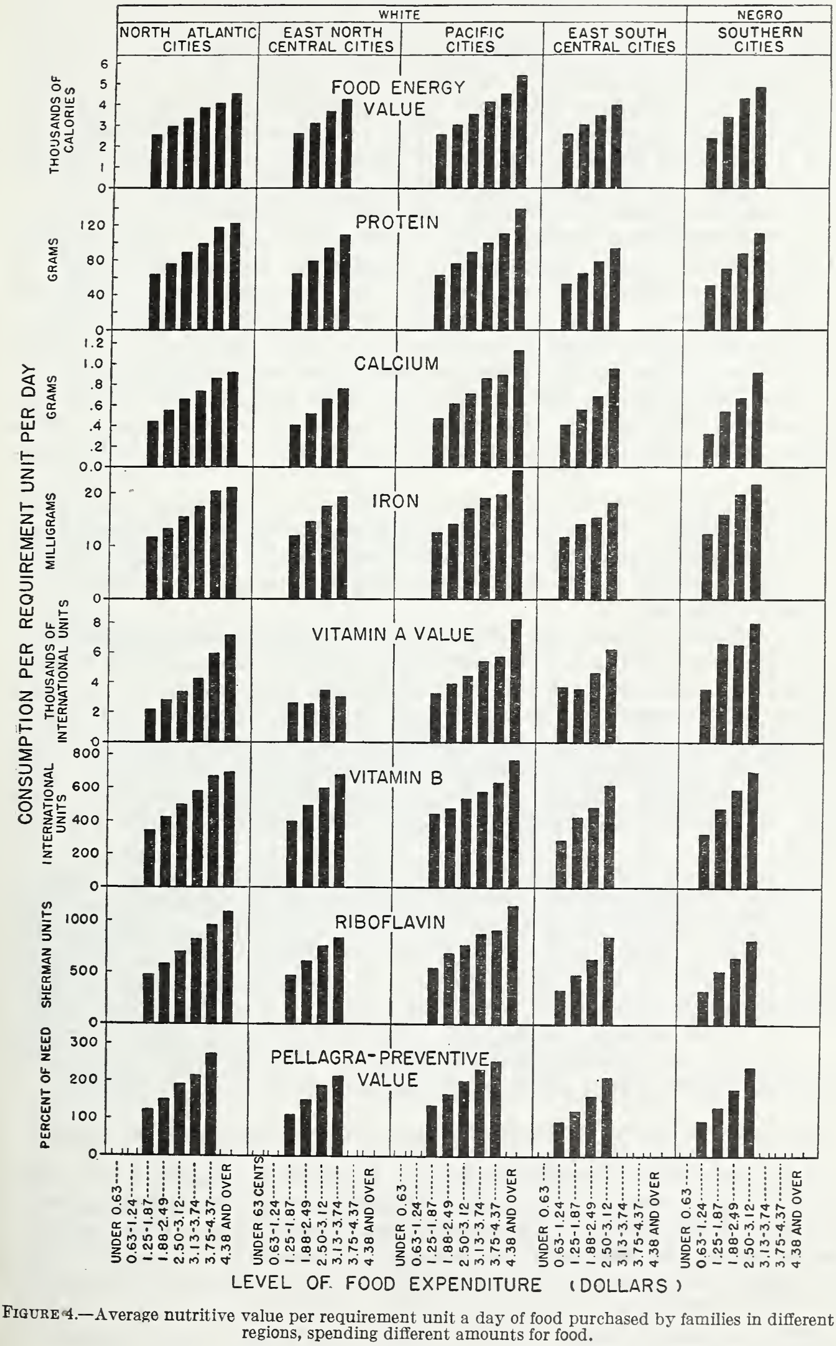

FIGURE 4.—Average nutritive value per requirement unit a day of food purchased by families in different regions, spending different amounts for food.

when they were most plentiful, vegetables such as sweet corn, peas, snap beans, and lima beans were chosen in preference to the iron- and vitamin A-rich turnip greens, kale, and collards which are obtainable in other seasons as well. Since these leafy foods are one of the outstanding sources of both iron and vitamin A in southern diets, it is not surprising to find average values for these nutrients lowest in the season when the consumption of the leafy foods was lowest. The lower vitamin A figures in summer may be attributed also to the greatly diminished supply of sweetpotatoes in this season of the year.

In southern diets vitamin B_1 was somewhat higher in winter and, at two expenditure levels, lower in summer than in other seasons. Differences in pork consumption—higher in winter and lower in summer—probably account in part for this seasonal variation in nutritive values. At two expenditure levels, diets of higher ascorbic acid content were found in summer, and were associated with the liberal use of fresh fruits, tomatoes, and other vegetables of all kinds. On the other hand, in diets costing $2.50–$3.12 a person a week, the highest average ascorbic acid content was found in the spring. This seems to be associated with a high consumption of green, leafy vegetables.

In the Pacific region data are available for each season for three spending levels. In general, fall and winter diets were highest in all nutrients, while spring and summer diets usually had lowest values. At each spending level, diets of the highest energy value were purchased in the fall.

The question of seasonal differences was studied also in another way. Averages of nutritive values were obtained by season for each region, combining expenditure levels at which data were available for each of the four seasons. The season in which the highest and lowest averages for each nutrient occurred is noted for each region in table 44. While the seasonal differences observed in this comparison were small, the highest values usually not exceeding the lowest by more than 10 percent, the findings indicate the direction of the seasonal trend.

In the spring were found the diets with the highest average vitamin A values; in the summer, those with the highest values for ascorbic acid and the lowest values for protein, iron, vitamin B_1, and riboflavin. In the fall or winter, diets were highest in calories, protein, phosphorus, iron, vitamin B_1, and riboflavin. In the fall, diets were usually highest, and in the winter, lowest in calcium. For the North Atlantic and Pacific regions, the highest figures for each of the nine nutrients occur in the same seasons for both regions. For six of the nine nutrients the lowest values occur in the same seasons for both regions.

ADEQUACY OF DIETS BY LEVEL OF FOOD EXPENDITURE AND BY REGION

At three food expenditure levels, $1.25–$1.87, $2.50–$3.12, and $3.75–$4.37 a person a week, diets of families in different regions were analyzed individually. They were also classified into three groups, according to the nutritive content per requirement unit as, (1) those in need of improvement with respect to one or more nutrient (poor); (2) those providing average minimum requirements with a limited margin of safety (fair); and (3) those providing a wide margin of safety over and above average minimum requirements (good).

Table 44.—*Seasons in which were found the highest (+) and lowest (−) average values for specified nutrients, by region*

Nutrient and region	Spring	Summer	Fall	Winter
Calories:				
North Atlantic		−	+	
East South Central			−	+
Pacific			+	−
Protein:				
North Atlantic		−	+	
East South Central		−		+
Pacific		−	+	
Calcium:				
North Atlantic			+	−
East South Central		+		−
Pacific			+	−
Phosphorus:				
North Atlantic		−	+	
East South Central	−			+
Pacific		−	+	
Iron:				
North Atlantic		−	+	
East South Central		−		+
Pacific		−	+	
Vitamin A:				
North Atlantic	+			−
East South Central	+	−		
Pacific	+		−	
Vitamin B_1:				
North Atlantic		−	+	
East South Central		−		+
Pacific		−	+	
Ascorbic acid:				
North Atlantic		+		−
East South Central		+		−
Pacific		+	−	
Riboflavin:				
North Atlantic		−	+	
East South Central		−	+	
Pacific		−	+	

Diets were assigned to the highest class, good, if the uncooked food material furnished per nutrition-requirement unit at least the following quantities of each nutrient: 67 g of protein, 0.68 g of calcium, 1.32 g of phosphorus, 15 mg of iron, 6,000 International Units of vitamin A, 500 International Units of vitamin B_1, 75 mg of ascorbic acid, and 600 Sherman units of riboflavin. These quantities allow about a 50-percent leeway above what are believed to be average minimum requirements for protein and minerals, and a generous margin above probable minimum needs for each vitamin, although perhaps not equally generous for each. If equitably distributed, the food in diets classed as good is sufficient in quantity and variety to provide each individual with the several nutrients as amply as indicated in the tables of allowances given in the preceding section.

A diet was classed as in need of improvement, poor, if per nutrition-requirement unit the raw foods provided less than the following quantities of any one nutrient: 45 g of protein, 0.45 g of calcium, 0.88 g of phosphorus, 10 mg of iron, 3,000 International Units of vitamin A, 250 International Units of vitamin B_1, 37 mg of ascorbic acid, or 300 Sherman units of riboflavin.

Diets that were better in every respect than the specifications for poor diets, but poorer in one or more nutrients than the specifications for good diets were classed as fair.

DISTRIBUTION OF RECORDS BY GRADE OF DIET

The distribution of 1,268 records by grade of diet is shown in table 45. At each of the three spending levels, all grades of diet were found, but the percentage that fell in the higher grades increased with rising expenditures for food.

With a food expenditure of $1.25–$1.87 a person a week, 80 percent or more of the diets of seven out of the nine regional groups were found to be in need of improvement with respect to one or more nutrients. Of the entire number, 462, only 96 diets could be classed as fair and another 8 as good.

Table 45.—*Distribution of 1,268 food records according to grade of diet, by level of food expenditure, color of family, and region*

Weekly per-capita expenditure for food,[1] color of family, and region	Records	Proportion graded [2]—		
		Good	Fair	Poor
$1.25–$1.87:				
White:	*Number*	*Percent*	*Percent*	*Percent*
North Atlantic	117	0	9	91
East North Central	70	3	10	87
West North Central	16	0	6	94
South Atlantic	20	0	10	90
East South Central	114	1	33	66
West South Central	11	0	9	91
Mountain	10	0	20	80
Pacific	21	5	14	81
Total or average	379	1	17	82
Negro:				
South	83	5	37	58
$2.50–$3.12:				
White:				
North Atlantic	253	5	32	63
East North Central	129	7	29	64
West North Central	37	8	24	68
South Atlantic	34	6	53	41
East South Central	54	35	32	33
West South Central	8	12	63	25
Mountain	25	12	40	48
Pacific	132	9	56	35
Total or average	672	9	38	53
Negro:				
South	18	28	28	44
$3.75–$4.37:				
White:				
North Atlantic	69	23	52	25
East North Central	10	20	60	20
Pacific	37	24	46	30
Total or average	116	23	51	26

[1] See footnote 1, table 3.

[2] For specifications, see p. 73.

The wide differences from one family to another in the nutritive returns obtained for the money spent are particularly apparent at the next level of food expenditure, $2.50–$3.12 a person a week. Nine percent of the 672 white families at this spending level obtained good diets; 38 percent, fair; and 53 percent selected poor diets. Twenty-eight percent of the Negro family diets were classed as good, 28 percent, fair, and 44 percent, poor. At this spending level, families in the East South Central cities seemed to procure better diets for their money than those in other regions.

With food expenditures of $3.75–$4.37 a person a week, it should not have been difficult in 1935 to purchase a good diet. Yet the diets of only about a quarter of the families studied could be so classified.

COMPARISON OF REGIONS BY GRADE OF DIET

In order to show more clearly the quality of the diets selected by all of the families of employed workers studied in different regions, a series of charts is presented in figures 5 to 9. These charts are more satisfactory for studying the dietary adequacy in a region than the figures in table 45, because they take into account the proportion of the families found at each expenditure level, as well as their distribution among the three grades of diet.

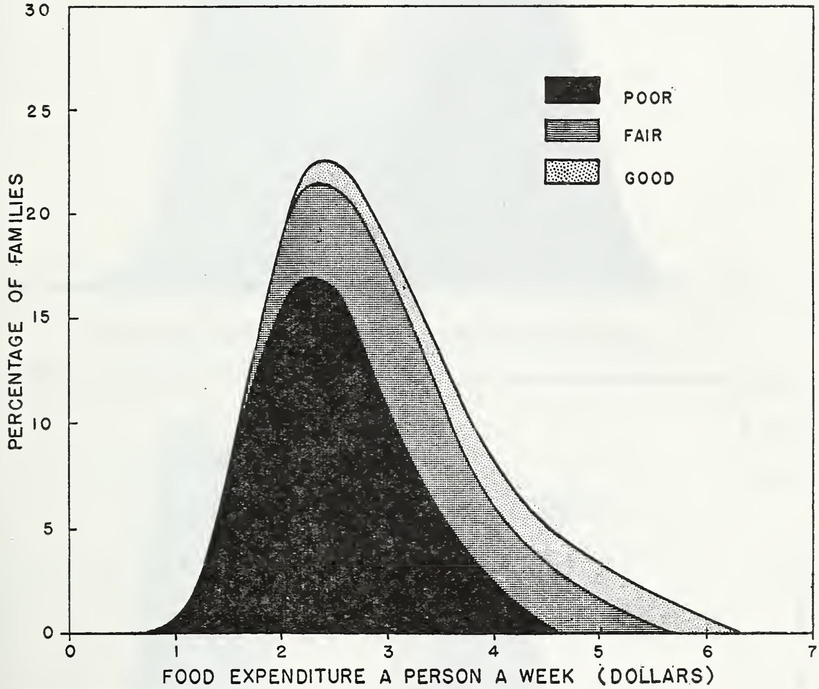

FIGURE 5.—North Atlantic families: Distribution by expenditure for food a person a week, and proportion obtaining diets graded poor, fair, and good.

In each chart the outer curve represents the distribution of records accepted for analysis, according to expenditures for food a person a week. The shaded areas within the outer curve indicate the proportion of families estimated to be obtaining diets of each grade. This shading is based on an analysis of all records at three spending levels. Sufficient study was made of records at other levels of expenditure to indicate that the interpolation and extrapolation involved in constructing these charts do not distort the facts. Actually the gradation of diets from the best to the poorest is more gradual than the shading of the charts indicates. The best of the diets classed as fair are similar to the poorest classed as good.

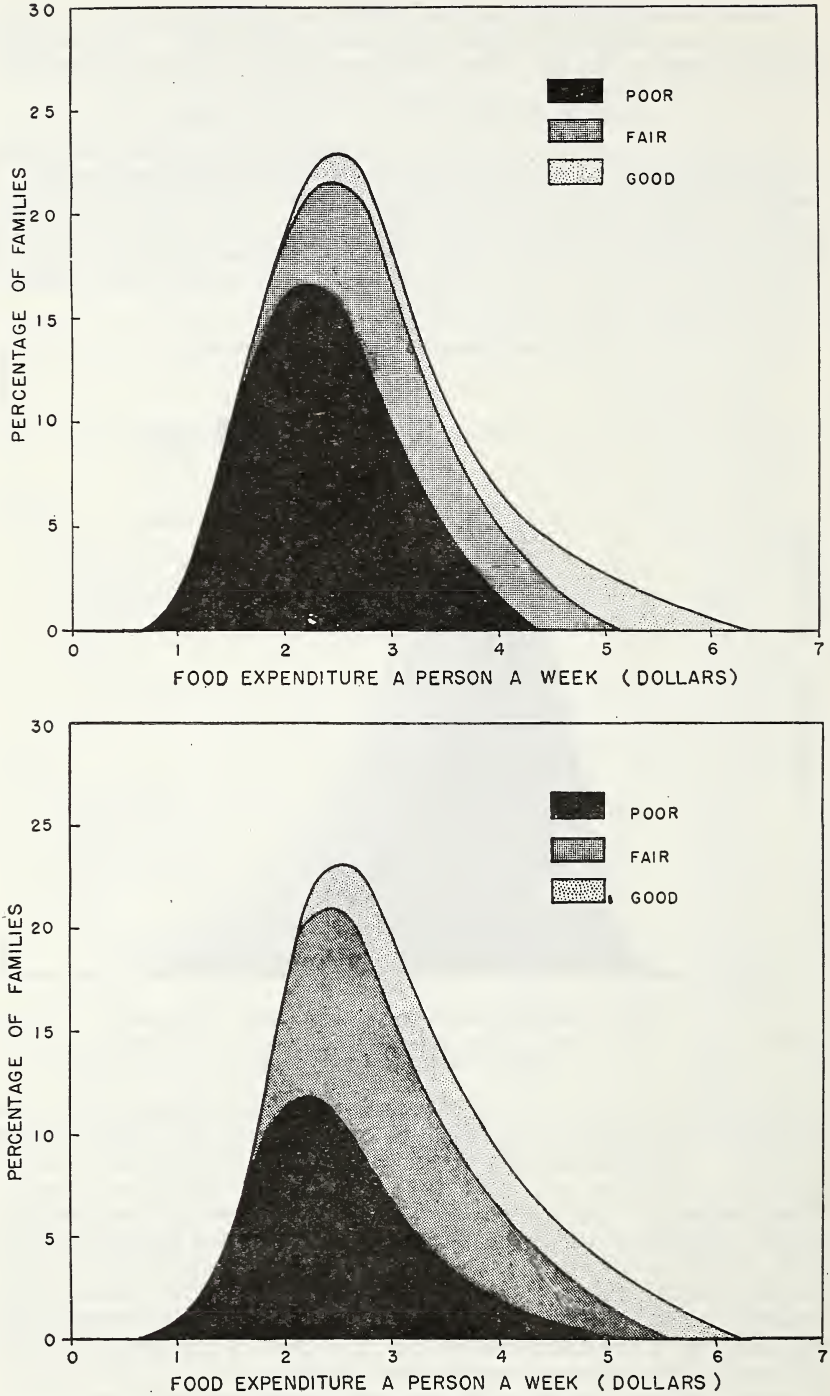

FIGURE 6.—East North Central families (above); FIGURE 7.—Pacific families. Distribution by expenditure for food a person a week, and proportion obtaining diets graded poor, fair, and good.

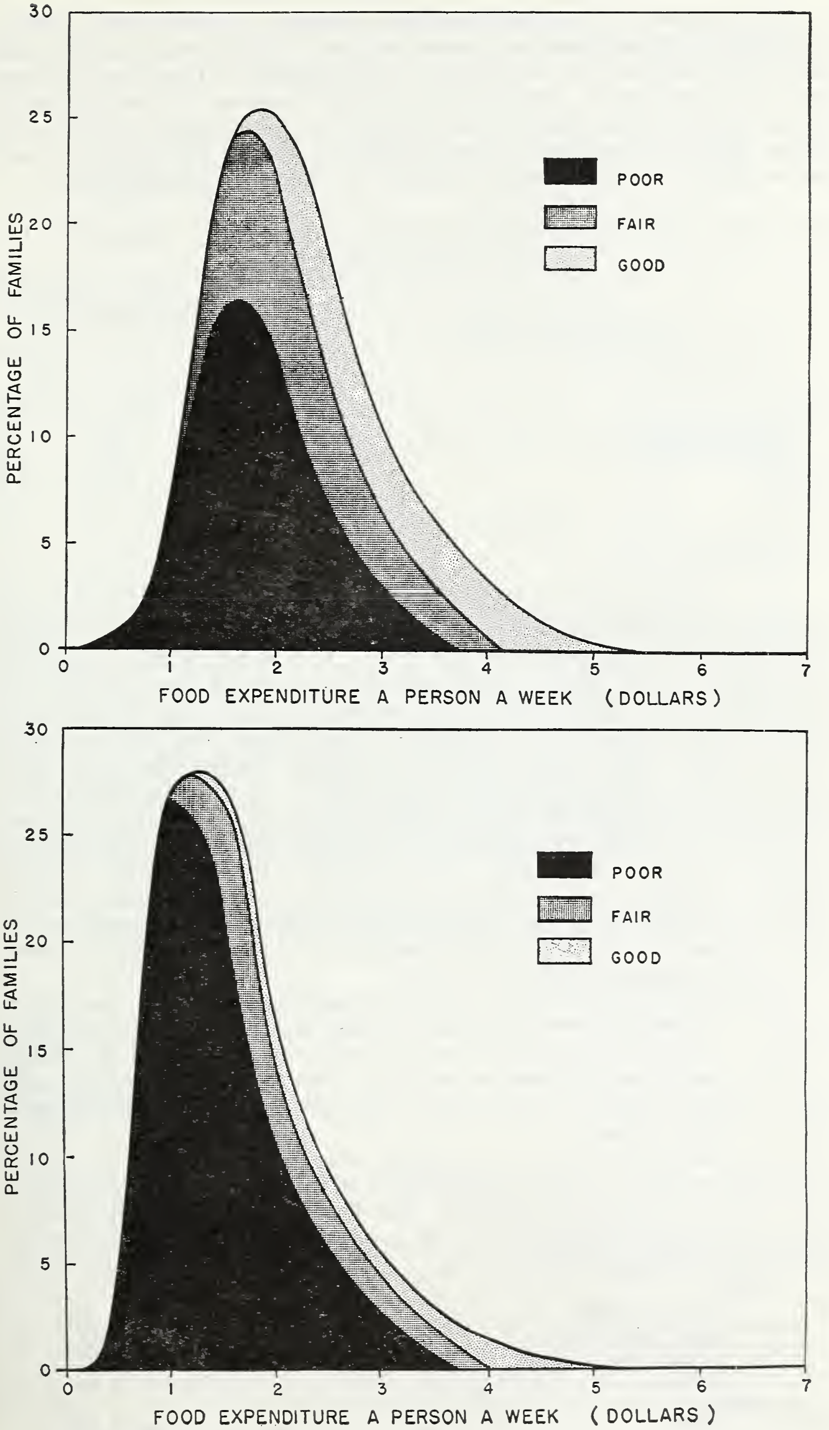

FIGURE 8.—East South Central white families (above); FIGURE 9.—Southern Negro families. Distribution by expenditure for food a person a week, and proportion obtaining diets graded poor, fair, and good.

A comparison of the charts and the summary in table 46 shows that more of the white families studied in East South Central and Pacific cities had satisfactory food than in other regions. Good or fair diets were obtained by 43 percent of the white families in North Atlantic cities, by 40 in East North Central cities, by 54 in East South Central cities, and by 60 percent of the families in Pacific cities. Thirty-six percent of the Negro families studied in the South fared as well.

TABLE 46.—*Proportion of all families studied obtaining diets of different grade,*[1] *by color of family and region*

Color of family and region	Proportion obtaining diets graded—		
	Good	Fair	Poor
	Percent	*Percent*	*Percent*
White:			
North Atlantic	11	32	57
East North Central	12	28	60
East South Central	21	33	46
Pacific	14	46	40
Negro:			
South	11	25	64

[1] For specifications, see p. 73.

The dietary picture drawn by the charts and the table for the sample of families studied is distinctly better than one which would represent city populations as a whole. It will be recalled from the description of the sample comprising the survey of disbursements in connection with which these food records were obtained (p. 2), that families were excluded if during the report year they had received relief, or if the chief earner had been employed for less than a minimal period, or if family incomes were under $500. It was also shown that the distributions according to economic status of all families included in the survey of disbursements and of those keeping food records were not similar in some regions. For example, in the Pacific region, families keeping food records represented a more prosperous group than those included in the general study of disbursements; whereas in the Southeast, the white families keeping food records were less prosperous than those in the general study.

Even among the relatively well-to-do families included in this study, some in each region were spending too little for food to buy good diets in 1935. Dietary adequacy in any given group appears to be related to the general level of food expenditure per person, the prices paid per unit for different types of food, and the proportions of different types of food purchased.

Not unmindful of those spending most and least for food, the investigator may use the expenditures of the middle half of families as an index of the general level. For Pacific cities this expenditure range was fairly high—$2.25–$3.60 a person a week. The figures for five regional groups follow:

White:	
North Atlantic	$2. 15–$3. 50
East North Central	2. 10– 3. 35
East South Central	1. 60– 2. 75
Pacific	2. 25– 3. 60
Negro:	
South	1. 05– 2. 15

Diets were found to be in definite need of improvement with respect to one or more nutrients when families spent less than the following sums a person a week for food:

White:	
North Atlantic	$1.60
East North Central	1.55
East South Central	1.00
Pacific	1.60
Negro:	
South	.95

Spending less than these amounts were 5, 8, 5, 4, and 16 percent of the families, respectively, in these five regional groups.

The chances for better diets increased with rising per-capita expenditures for foods. On the tables of the more well-to-do there appeared several times as much milk, butter, meat, eggs, green-colored and leafy vegetables, and fruits, as on the tables of the poor. These foods add interest and flavor to meals, and some of them are especially helpful in reinforcing diets where they are most likely to be deficient from the standpoint of good nutrition.

But the quality of the food supply selected by families is by no means only a matter of level of food expenditures. At every expenditure level above a certain minimum, some families succeed in obtaining good or fair diets while others get an inadequate food supply.

The wide differences in the quality of diets obtained by families in different groups for the same expenditure of money is exemplified in table 47. With $2.50 a person a week for food, good or fair diets were obtained by 63 percent of the white families in East South Central cities, by 53 percent of families in Pacific cities, and by only 32 and 27 percent, respectively, of families in East North Central and North Atlantic cities. These regional differences are conditioned, of course, by many factors, including market supplies and facilities, retail prices, traditional food habits, and education, all of which probably are more or less influenced by income and by social heritage.

TABLE 47.—*Proportion of families spending $2.50 a person a week for food that obtained diets of different grade,*[1] *by color of family and region*

Color of family and region	Proportion obtaining diets graded—		
	Good	Fair	Poor
	Percent	*Percent*	*Percent*
White:			
North Atlantic	5	22	73
East North Central	6	26	68
East South Central	32	31	37
Pacific	10	43	47
Negro:			
South	14	26	60

[1] For specifications, see p. 73.

Within a single region there are to be found differences in the quality of diet that different families manage to procure for the same amount of money. Whereas for an expenditure of $2.50 a person a week for food, 32 percent of the families in East South Central cities bought good diets, another 37 percent obtained diets that had to be classed as poor. These differences reflect unequal skill on the part of the housewife in over-the-counter buying, differences in family tastes or customs, and differences in the knowledge of food values in relation to cost or its application by the family's purchasing agent.

The average prices per unit paid by certain regional groups are shown in table 48 for each of 11 important groups of food. No information is available on the market quality of the foods selected, or on factors such as differences in the cost of producing different forms of food or in transferring them from the point of production to the local retail outlet, or differences in services such as credit or delivery. These and other factors influence retail food prices.

Most of the unit prices given in table 48 refer to groups of food with similar though not identical nutritive value, rather than to individual items. In the case of food groups including two or more articles of food differing in retail price per unit, the proportion in which the more and the less expensive forms of the food class are selected markedly affect the average unit price. Thus, whole fluid milk was relatively expensive in the cities studied in the Southeast—12.6 cents per quart as compared with 12 and 11 cents in the North Atlantic and Pacific regions. But by the use of a large proportion of the less expensive forms of milk—evaporated and dried—the price paid by the southern families for the quantity of milk solids ordinarily furnished by a quart of fluid milk was reduced to a lower-than-average level. On the other hand, for an individual item such as eggs regional price differences at each season reflect differences in market quality as well as in production and handling charges.

Table 48.—*Average prices reported per unit of specified food groups by families classified by level of expenditure, color of family, and region, December 1934–February 1937*

Weekly per-capita expenditure for food,[1] color of family, and region	Eggs (dozen)	Milk or its equivalent[2] (quart)	Fats (pound)	Lean meat, poultry, fish (pound)	Sugars (pound)	Grain products (pound)[3]	Potatoes, sweetpotatoes (pound)	Mature beans and peas, nuts (pound)	Tomatoes, citrus fruits (pound)	Leafy, green, and yellow vegetables (pound)	Other vegetables and fruits (pound)
$1.25–$1.87											
White:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
North Atlantic	32.1	10.3	25.9	22.4	6.3	11.5	1.6	11.5	8.5	7.2	6.2
Pacific	29.7	10.1	25.0	20.8	6.8	11.4	1.6	11.2	7.9	6.6	6.0
East South Central	29.8	9.2	20.9	19.5	7.5	7.9	2.2	10.2	6.4	5.7	5.4
Negro:											
South	27.9	9.9	19.5	15.8	7.0	5.9	2.4	7.3	7.1	4.0	4.6
$2.50–$3.12											
White:											
North Atlantic	35.9	11.2	28.0	26.4	7.2	13.8	1.8	12.0	8.0	7.5	6.7
Pacific	29.4	10.1	28.3	21.9	8.0	13.2	2.3	13.2	5.7	5.7	6.1
East South Central	32.6	9.9	23.0	24.1	8.1	10.4	2.5	11.6	6.4	6.4	6.2
Negro:											
South	31.5	9.9	22.7	19.6	6.7	6.7	2.2	14.4	6.7	4.2	3.4

[1] See footnote 1, table 3. [2] See footnote 2, table 10. [3] See footnote 2, table 13.

Compared with families in other regions, southern families—both white and Negro—bought a much smaller proportion of their fats in the form of butter and cream. As a result, the price paid per pound for fat was lower, but this choice also resulted in a reduction in the quantity of vitamin A furnished per pound by fatty foods. However, the large quantities of vitamin A-rich vegetables commonly eaten in the South compensate in large measure for this rather low butter consumption.

In selecting meats, northern families tend to choose a larger proportion of the more expensive tender cuts—steaks, roasts, chops—than southern families, especially more than Negro families. The more tender cuts may be cooked quickly by methods that develop a highly prized flavor, but there is little difference in the nutritive value of the edible portion of different cuts of muscle meats.

Differences in unit prices due to processing and distribution costs are noticeable in the case of grain products. Families in the North and West purchased a larger share of their grain products in the form of bread, other baked goods, and ready-to-eat cereals than did southern families. Southern families bought more flour and corn meal for biscuits and quick breads, and more rice. Retail prices of highly processed foods tend, of course, to be relatively high per unit of food value.

Southern families purchased more sweetpotatoes in proportion to potatoes than those in other parts of the country. Since prices of sweetpotatoes usually are higher than of potatoes, and prices of potatoes higher in the South than in the North, the average price per pound paid in the South for this group usually exceeded that paid elsewhere.

In the North and West, cabbage, lettuce, green beans, and peas head the list of green-colored and leafy vegetables. Except for lettuce these are widely used also in the South. In addition, however, families in the South make extensive use of fresh lima beans, okra, and many such inexpensive locally grown leafy foods as collards, kale, mustard, and turnip greens. As shown later (p. 88) the nutritive value of the combinations of vegetables purchased in the South usually is much higher than for those commonly selected in the North, though the price per pound is usually lower.

These few examples indicate why the prices families pay per unit for groups of foods similar in nutritive value differ widely from one part of the country to another. As a result of such differences in selections within various food groups, families in modal food-spending classes might pay, in their respective markets, as little as $1.70 a person a week for food (Negro families in the Southeast) or as much as $2.45 a person a week (North Atlantic families) even when following the same general low-cost diet plan. (See p. 83.)

For a given expenditure, differences in food-selection habits the country over result in diets containing varying quantities of essential nutrients. An examination of the records from cities in all regions shows that some families obtained diets furnishing only 45 g of protein per requirement unit a day for an expenditure of $1.88 per expenditure unit a week for food; whereas half of the families obtained for this sum diets furnishing 70 or more grams a unit a day. Or, to take a more striking illustration, some families spent as much as $4.50 per expenditure unit a week without obtaining 0.45 g of calcium a day for each requirement unit. On the other hand, half of the families spending $3.00 an expenditure unit a week for food succeeded in getting 0.70 g or more of calcium per requirement unit daily.

A fuller knowledge of nutritive values in relation to cost, together with a keen appreciation of the importance of dietary adequacy to well-being could result in a higher proportion of good diets in every region. This is of particular significance since, as table 46 shows, from 40 to 60 percent of the white families studied in four regions and more than 60 percent of the Negro families studied in the South were found to have diets needing improvement with respect to one or more nutrients. Continuous subsistence on diets such as those here classified as poor will almost certainly impair the body's defenses against disease.

No direct information is available on the health history of the families keeping food records or on their state of nutrition at the time the dietary records were kept. The United States Public Health Service and the Milbank Memorial Fund in a report on the effect of the depression on health (*61*) pointed out a marked association between income and dietary adequacy, and an inverse correlation between income and the incidence of illness, but made no direct association between diet and health.

The same poverty that precludes proper medical care is also a barrier to a good food supply and other hygienic environmental conditions. But since a good diet is one of the chief aids of the physician in disease prevention, it may be not without significance that among Negro families in southern cities where the proportion of poor diets was found to be especially high, there is also reported a higher-than-average maternal death rate and a higher-than-average incidence of infectious and parasitic diseases in general (*55*). Their death rates from pulmonary tuberculosis, pneumonia, and puerperal septicemia were from one and one-half to three times as high as among white families in Pacific cities where a much higher proportion of the population enjoyed good diets, and a smaller proportion had poor diets.

Dietary deficiencies are seldom single. But in the population group included in this study relative shortages were encountered more frequently in the case of some nutrients than others. Fewer than 2 percent of employed white workers are believed to have diets furnishing less than the average minimum requirement of protein, 45 g a requirement unit a day. About 5 percent had diets furnishing less than 10 mg of iron; about 16 percent, less than 0.45 g of calcium; and about 40 percent, less than 3,000 International Units of vitamin A.

From these figures referring to families of employed white workers, it is clear that deficiencies of vitamin A and calcium are often encountered. The experience of physicians that vitamin B_1 therapy is frequently useful in alleviating gastrointestinal disorders and certain neuritides (*57*) may be associated with the fact that diets of about a tenth of the families furnished less than 300 International Units of vitamin B_1 a requirement unit a day and of about half, less than 500 International Units. The widespread incidence of pellagra in the South is evidence of serious deficiencies in the pellagra-preventive factors in diets of low-income groups in that section of the United States.

Even when dietary shortages are not severe enough to result in marked clinical symptoms, there probably is to be found a general lowering of the resistance of the body. Many clinicians believe that certain symptoms, too vague or minor to be diagnosed as disease and difficult, in view of environmental factors, to attribute to a definite cause, are often due to inadequate nutrition. Lack of appetite, for instance, is sometimes due to inadequate quantities of vitamin B_1 in the diet, and in such cases can be corrected by increasing the intake of this nutrient. Irritability in children has sometimes been associated with low vitamin C intake. Poor visual adaptation to darkness can frequently be corrected by increasing the consumption of vitamin A. These and other abnormalities in mild form are to be expected when one considers the average composition of diets obtained by some population groups. Frequently there are found diets so low in protective foods that it would not be surprising to find the kind of chronic degenerative disorders described by Langstroth (*22*) which proved to be amenable to dietary treatment.

EXPENDITURES THAT SUPPORT ADEQUATE DIETS

The level of expenditure for food above which families can purchase nutritionally adequate diets differs from one region to another. This is due in part to varying levels of retail food prices, in part to differences in dietary habits, and in part to differences in the quality and form in which foods customarily are purchased.

Many agencies have evolved food budgets designed to give good returns in nutritive value for the money spent. These are often stated in terms of 10 to 15 important foods or food groups, in order to permit some adaptation to the market supplies and food customs in different parts of the country. Such a plan was followed by the United States Bureau of Home Economics (*7*) in developing diet plans for different economic groups.

In pricing such budgets a decision must be reached as to which articles of food and in what form, quality, and quantity each will be included in the aggregate quantity specified for each food group by the diet plan.

For the purpose of this study it was decided to price the quantities of each food group specified in a low-cost diet plan (*7*) by the average retail price that families paid for the kinds and qualities of food customarily purchased within each food group as shown by their dietary records. Priced at the retail prices reported as paid in 1935 by families in modal food-spending classes (see p. 80), an inexpensive type of adequate diet could have been bought for the following amounts, a person a week:

White:	
North Atlantic	$2. 45
East South Central	2. 20
Pacific	2. 25
Negro:	
South	1. 70

This method of pricing a food budget does not provide a minimal figure. It is, however, lower for some groups than if a food budget based on northern food habits were priced everywhere.

Another method of pricing budgets is to apply regional prices to some predetermined and carefully specified bill of goods within each food group, regardless of customary selection of foods. Usually little regional variation in food costs is then apparent. For example, making use of average prices for the year 1935 as reported for 79 foods by the United States Bureau of Labor Statistics, for the three cities in the East South Central region included in this study, for three of the cities in the Pacific region, and for six of the cities of the North Atlantic region, the same low-cost diet plan interpreted with apparently identical choices cost $2.40, $2.40, and $2.50 a person a week, respectively.

Stecker (*51*), using 44 foods in making up the budget, and the prices reported by the United States Bureau of Labor Statistics for March 15, 1935, found the cost of a year's food supply for a family of four to fall between $443 and $447 for the same three Southern cities; $442 and $460 for the same three Pacific cities; and $442 and $478 for the same six North Atlantic cities. The variations that exist in the cost of budgets of identical foods depend primarily on price differences current from region to region when careful pricing by specification is conducted. No account is taken of special products of a region or differences in prevailing food selection habits.

About 10 percent of the diets classed as good were actually purchased by families for less than the following amounts a person a week:

White:	
North Atlantic	$2.75
East North Central	2.70
East South Central	2.15
Pacific	2.60
Negro:	
South	1.90

Something of the character of the diets classed as good is shown in table 49, which records the quantities of eggs, dairy products, succulent vegetables, and fruits included in the food supply. Differences in the consumption of these foods usually are the chief points of contrast between good and poor diets. Each diet from which these average quantities of food were derived met the specifications for a good diet described earlier. But the averages differ from region to region in their content of each of these classes of food. Outstanding is the relatively low quantity of milk, tomatoes, and citrus fruit in the diet of southern Negro families. To a large extent this shortage is balanced by the large quantity of leafy, green, and yellow vegetables consumed.

TABLE 49.—*Estimated quantities of specified foods a person a year, in diets classed as good, by color of family and region, compared with a plan for a low-cost adequate diet*

Item	Eggs	Milk or its equivalent [1]	Butter	Tomatoes, citrus fruit	Leafy, green, and yellow vegetables [2]	Other vegetables and fruits [3]
Diets of white families:	*Dozen*	*Quarts*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
North Atlantic	23	187	18	115	128	174
East South Central	32	273	15	131	166	177
Pacific	24	228	18	296	217	473
Diets of Negro families:						
South	18	114	14	31	263	208
Plan for low-cost adequate diet	20	260	20	60	120	185

[1] See footnote 2, table 10.

[2] Does not include sweetpotatoes.

[3] Does not include potatoes, sweetpotatoes, mature dry legumes. Includes fresh fruit equivalent of dried fruits.

The expenditure levels below which 10 percent of the good diets were purchased may perhaps be taken as a reasonable yardstick of minimum cost of a good diet in the different regions. They cover, with a little leeway for some groups, the cost of a fully adequate food budget. The proportion of families, region by region, spending as much as or more than the stated sums was:

	Percent
White:	
North Atlantic	51
East North Central	48
East South Central	50
Pacific	60
Negro:	
South	32

However, not all families spending enough to buy fully adequate diets succeeded in getting them. Of every 10 white families spending enough, only 2 to 4 selected good diets. Among Negro families in the South, the proportion was a little over 3 out of 10. These figures point to the great need for more widespread education in nutrition and in over-the-counter food buying in order to help city families make the most of their money resources for food.

ECONOMY IN DIET SELECTION

The varying proportions of good, fair, and poor diets found in different regions, and the wide difference in the quality of diets purchased for the same cost in any one community create an interest in the factors making for economy in food selection.

CONTRIBUTIONS OF DIFFERENT FOODS TO THE DIET

Some foods are important in the diet because of the large quantities in which they customarily are consumed. Some are unique also for the excellent returns in nutritive values which they yield for customary expenditure. While prevailing dietary patterns and price levels differ from one part of the country to another, and hence circumscribe generalizations on these points, it is nevertheless instructive to compare the returns in food values which various groups of families get for their expenditure.

Fairly typical of the dietary situation among white families are the figures in table 50, which describe spring diets of families in East North Central cities, spending $1.88–$2.49 a person a week for food. This table shows the percentage of money spent for 17 foods or classes of food and also the proportion of calories and of each of the eight nutrients obtained from the several foods or food classes. If a food or group of foods furnishes a larger share of any nutrient than the share it takes of the money spent for food, it may be considered a comparatively cheap source of that nutrient. Any food that yields several nutrients cheaply should be considered especially economical. Such was the case with eggs, milk and cheese, potatoes, and dried beans, peas, and nuts, which in these East North Central diets were cheap sources of five or more of the nine nutrients considered.

Dairy products (milk, cheese, butter) took 17 percent of the money for food and supplied in return 18 percent of the protein, 65 of the calcium, 29 of the phosphorus, 22 of the vitamin A value, and 36 percent of the riboflavin. For these nutrients they were cheap and important sources.

Meat, poultry, and fish, as a class, were inexpensive and important sources of protein, vitamin B_1, and riboflavin. In the quantities ordinarily used they also were important, though not especially cheap, sources of calories, phosphorus, and iron.

Fats and sugars were inexpensive sources of calories, and the grain products, particularly in their less highly processed and less highly refined forms, were cheap and significant sources of calories, protein, phosphorus, and iron.

As a class, vegetables and fruits are outstanding sources of several vitamins. Potatoes, tomatoes, the leafy and green-colored vegetables, and the fruits are particularly important and cheap sources of ascorbic acid. Potatoes and the dried legumes were inexpensive sources of a number of nutrients. The green and yellow-colored products have high vitamin A value, and for a relatively small expenditure contribute more of this factor than any other class of foods. For 5 percent of the expenditures for food they provided 33 percent of the vitamin A value and 15 percent of the ascorbic acid.

TABLE 50.—*Average distribution of expenditures among specified groups of foods, and proportion of nutritive content contributed by each food group*

[26 East North Central families spending $1.88–$2.49 weekly per capita for food, spring 1935]

Food group	Proportion of money allocated	Proportion furnished of—								
		2,950 calories	74 g protein	0.54 g calcium	1.21 g phosphorus	13 mg iron	2,600 International Units vitamin A	410 International Units vitamin B_1	56 mg ascorbic acid	590 Sherman units riboflavin
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Eggs	5.4	2.5	7.5	4.2	6.3	10.0	8.0	4.5	0	8.0
Milk, cheese, ice cream	12.1	10.0	17.4	64.0	28.5	6.6	13.1	13.6	5.3	35.4
Butter, cream	4.9	6.0	.3	.9	.5	.4	9.3	.1	0	.2
Other fats, including fat meat	5.6	12.7	1.3	.4	.8	.9	(1)	2.6	0	.7
Lean meat, poultry, fish	24.2	11.6	31.8	2.2	21.8	28.5	7.5	31.4	.8	28.6
Sugars	3.4	10.7	.1	.8	.2	1.0	(1)	(1)	.7	0
Bread, other baked goods	13.6	19.8	16.2	8.4	11.0	10.7	3.8	4.3	1.3	5.0
Ready-to-eat cereals	.9	.8	.8	.3	1.6	1.3	(1)	1.1	0	.4
Flour, other cereals	3.6	10.7	11.2	2.5	7.6	7.2	.3	2.3	.1	.1
Potatoes, sweetpotatoes	2.2	6.1	4.6	3.7	8.3	12.5	11.2	15.4	23.7	7.7
Mature beans and peas, nuts	.9	1.6	3.0	1.9	3.7	5.2	0	6.6	0	.6
Leafy, green, and yellow vegetables	5.1	1.1	2.1	3.5	3.1	5.4	32.8	5.0	15.0	4.3
Tomatoes	1.7	.3	.4	.5	.6	.8	8.4	2.1	7.8	.6
Other vegetables	1.8	.7	.8	1.6	1.3	1.2	.4	1.5	5.0	1.0
Citrus fruits	2.2	.7	.3	1.9	.6	1.2	.3	3.4	19.1	2.1
Other fruits	6.0	3.6	1.0	2.6	2.4	6.1	4.6	5.5	21.0	4.4
Miscellaneous	6.4	1.1	1.2	.6	1.7	1.0	.3	.6	.2	.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than 0.1 percent.

The most important sources of each nutrient were much the same in the diets of different groups of white families. In the East North Central diets here described, about 60 percent of the total calories came from fats, sugars, and grain products. Over 60 percent of the protein was furnished by grain products and lean meat. Over 60 percent of the calcium came from milk. Iron and vitamin B_1 were obtained from a variety of sources, with fruits and vegetables the cheapest source. Eggs, milk products, and the green and yellow-colored vegetables together supplied over 60 percent of the vitamin A value. Ascorbic acid was obtained almost wholly from vegetables and fruits. Milk and cheese, lean meat, poultry, and fish furnished most of the riboflavin, with milk and cheese the more economical of these sources.

The important contribution made by the dairy products to the diets of this particular group of families is typical of their place in diets of a large proportion of white families in this country. There are, however, large population groups in other parts of the world to whom little or no milk is available, and whose dietary requirements must be met in other ways. Even in this country there are many families whose diets contain but small quantities of dairy products. This was found to be true of Negro families living in southern cities and for this reason their diets are distinctly different in character from the usual type of diet selected by white families.

Table 51 presents figures based on the spring diets of a group of Negro families spending $1.25–$1.87 a person a week for food. As can be seen from this table, these families spent 9 percent of their food money for milk, cheese, and butter, which together furnished 7 percent of their protein, 29 of their calcium, 12 of the phosphorus, 2 of the vitamin A value, and 14 percent of the riboflavin. Much of their calcium, vitamin A, and riboflavin was derived from the leafy and green-colored vegetables. These products supplied 42 percent of their calcium, 73 of their vitamin A, and 36 of their riboflavin at a cost of only 6 percent of their food money.

TABLE 51.—*Average distribution of expenditures among specified groups of foods, and proportion of nutritive content contributed by each food group*

[23 southern Negro families spending $1.25–$1.87 weekly per capita for food, spring 1935]

Food group	Proportion of money allocated	Proportion furnished of—								
		3,460 calories	70 g protein	0.54 g calcium	1.40 g phosphorus	16 mg iron	6,600 International Units vitamin A	480 International Units vitamin B_1	58 mg ascorbic acid	510 Sherman units of riboflavin
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Eggs	4.3	1.2	4.2	2.6	3.6	4.3	1.2	1.9	0	4.5
Milk, cheese, ice cream	6.0	2.8	6.8	28.5	12.1	2.1	.9	3.9	.5	14.2
Butter, cream	3.0	2.1	.1	.2	.1	.1	1.1	0	0	0
Other fats, including fat meat	18.8	28.1	3.5	.6	5.1	4.2	(1)	6.1	0	2.8
Lean meat, poultry, fish	23.2	10.0	28.0	2.6	19.8	16.6	1.9	28.5	.8	24.0
Sugars	5.8	9.5	.1	1.3	.3	2.5	0	(1)	.9	0
Bread, other baked goods	4.1	3.2	3.7	2.1	2.3	1.7	(1)	.2	.2	.9
Ready-to-eat cereals	(1)	(1)	(1)	(1)	(1)	(1)	0	0	0	0
Flour, other cereals	12.1	31.5	36.1	8.6	32.5	29.5	(1)	19.2	0	2.8
Potatoes, sweetpotatoes	3.8	4.7	3.2	3.6	5.7	6.6	19.3	12.1	15.0	6.9
Mature beans and peas, nuts	2.4	4.0	8.8	5.0	11.1	12.3	.1	14.9	0	4.8
Leafy, green, and yellow vegetables	5.8	1.5	4.2	41.9	5.2	16.6	73.1	10.3	69.7	36.2
Tomatoes	1.2	.2	.2	.3	.4	.4	1.2	.9	3.4	.3
Other vegetables	1.3	.3	.5	1.5	.9	1.0	.3	.8	3.3	1.0
Citrus fruits	.7	.1	.1	.6	.2	.3	(1)	.6	4.0	.5
Other fruits	1.5	.7	.2	.6	.7	1.8	.9	.6	2.2	1.1
Miscellaneous	6.0	.1	.3	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than 0.1 percent.

Since calcium and vitamin A are two nutrients in which diets often are poorly fortified, the difference in the source of these factors in these two types of dietaries found in this country is of interest. The second type (southern Negro) depends directly upon plant products for a large share of its calcium and for practically all of its vitamin A value. It includes more than twice as much of the green and leafy vegetables. However, the nutritive value and cost of such products as a group can vary widely. The collards, kale, turnip, and mustard greens freely used in the South are usually much cheaper and at the same time much richer in calcium, iron, vitamin A, and riboflavin than bleached cabbage and lettuce—the leafy foods so commonly used in the North. Table 52 compares the cost and nutritive value per pound of leafy, green, and yellow vegetables typical of city family choices in different regions of this country.

TABLE 52.—*Variations in cost and nutritive value of green, leafy, and yellow*[1] *vegetables selected by families spending $1.25–$1.87 a person a week for food, by color of family and region*

Color of family and region	Cost per pound	Average content per pound of—			
		Calcium	Iron	Vitamin A value	Riboflavin
	Cents	*Grams*	*Milligrams*	*International Units*	*Sherman units*
White:					
North Atlantic	7.2	0.15	3.4	7,000	160
Pacific	6.6	.17	3.7	8,200	180
East South Central	5.7	.34	5.3	10,300	280
Negro:					
South	4.0	.56	6.4	14,600	460

[1] Sweetpotatoes not included.

The first type of diet (white family) includes almost twice as many eggs and almost three times as much milk as the second. The first type takes advantage of the fact that the hen and the cow put in form suitable for human consumption the nutrients contained in plant products that are too coarse to serve directly as human food. A dietary containing large proportions of animal products is usually more costly than average, but in addition to providing the two nutrients here discussed, milk and eggs fortify the diet also in protein of good quality, in phosphorus and iron in readily utilizable forms, as well as in important quantities of other minerals and vitamins. Diets in every region could be improved without adding to cost by giving more prominence to foods that are economical sources of the nutrients found to be relatively deficient.

COMPOSITION OF DIETS AS RELATED TO ADEQUACY

The fact that different types of food make fairly characteristic contributions to the diet has led to certain generalizations regarding the dietary prominence that should be given to each in order to put into everyday practice our knowledge of nutrition. This prominence may be measured in one or more of three ways—in the proportion of calories furnished by each, in the share of the money for food allocated to each, and in the quantities of certain foods consumed daily.

CALORIES DERIVED FROM SPECIFIED FOOD CLASSES

To put into practice what is known about food values and body requirements, Sherman (*45*) suggests that at least half of the calories in the diet be obtained from the protective foods—milk and its products, fruits, vegetables, and eggs—and at least half of the breadstuffs and other cereal or grain products be in the whole grain or dark, or "unskimmed" forms.

Rose (*37*) also has formulated plans which specify the proportion of the total calories to be derived from each food group in constructing adequate diets at different cost levels. It is of interest to compare the distribution of calories found in the present study with those she suggests for family diets and see to what extent, if at all, the differences account for the observed deviations in average nutritive values of diets from generally accepted specifications for good diets.

In making such comparisons it is important that the energy value of the diets be adequate and that the total number of calories be similar in each case. Therefore, in this section diets are compared which furnished an average energy value of approximately 3,000 calories a requirement unit a day. In the Southeast they were purchased for $1.25–$1.87 a person a week, and in other regions, for $1.88–$2.49.

Table 53 shows the average energy value and the distribution of calories among specified food classes in these diets, along with the distribution suggested by Rose for very economical diets, and for diets for families of moderate and high incomes.

TABLE 53.—*Energy value of diets selected* [1] *in each region for comparison with Rose's* [2] *plans for adequate diets, and percentage* [3] *of calories derived from specified classes of food*

Item	Energy value per adult unit [4]	Calories derived from—						
		Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits
	Calories	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
White families:								
North Atlantic [5]	2,960	11	14	15	12	33	8	6
East North Central [5]	3,140	10	14	17	11	33	8	6
West North Central [5]	3,130	13	14	14	12	32	8	6
South Atlantic [6]	2,740	7	12	20	13	32	10	5
East South Central [6]	3,060	8	9	22	14	33	8	5
West South Central [5]	3,230	11	13	20	11	30	7	6
Mountain [5]	2,940	12	13	16	16	27	6	9
Pacific [5]	3,100	12	13	16	12	29	7	10
Negro families:								
South [6]	3,450	3	10	30	12	33	7	4
Rose's plans for—								
Very economical diet	3,000	[7] 20–25	[8] 5–10	10–12	10–12	30–40	12–15	
Moderate cost diet	3,000	[7] 25	[8] 8–15	10–20	10–12	25–30	15–20	
Diet without cost restriction	3,000	[7] 20–25	[8] 10–15	15–20	10–12	18–20	18–24	

[1] The diets included were those in which the energy value was nearest 3,000 calories per energy-requirement unit per day.

[2] ROSE (*37*).

[3] Approximately 1 percent of the calories was derived from miscellaneous foods.

[4] Bureau of Home Economics scale (p. 42).

[5] Weekly expenditure for food per capita was $1.88–$2.49, at 1935 price levels.

[6] Weekly expenditure for food per capita was $1.25–$1.87, at 1935 price levels.

[7] Excludes cheese.

[8] Includes cheese.

Certain outstanding differences are at once apparent. In no group of families included in this comparison does the proportion of calories derived from milk approach Rose's suggested allowance of 20 to 25 percent. Southern Negroes obtained only 3 percent of their calories from milk; South Atlantic and East South Central white families, 7 to 8; and families in other regional groups, from 10 to 13 percent. The discrepancy between the proportion of calories derived from milk and the proportion recommended undoubtedly accounts for the widespread deficiency in calcium found in most of these diets. A generous supply of milk and cheese is the best guarantee of an adequate supply of calcium, although in the case of the Negro families, diets were safeguarded to a large extent by the quantity and kind of green leaves consumed. Other nutrients often found to be inadequately supplied in American diets are vitamin A, and in the South, the pellagra-preventive factor. The intake of each of these nutrients as well as of calcium would have been augmented by a greater consumption of milk and of green-colored, leafy vegetables.

The percentage of calories obtained from eggs, lean meat, poultry, and fish tended to exceed the allowance of 5 to 10 percent which Rose proposed for economical diets. With averages ranging from 9 to 14 percent of the calories from these foods, the low-cost diets in this study resemble closely the allowances of Rose for moderately priced or high-priced diets. Eggs and meat are useful foods of high nutritive content, but as a class they tend to be expensive sources of nutrients.

Very striking are the differences between actual diets and the diet plans in the share of calories derived from fats. Rose's allowance for the economical dietary is 10 to 12 percent of the calories, but in the low-cost diets recorded in the North and West, the calories from fat average from 14 to 17 percent of the total and in diets of white southern families, twice the suggested proportion. In fat content, these diets closely resemble Rose's plan for high-priced diets which derive 15 to 20 percent of the calories from fat. A still higher proportion, 30 percent of the calories, was from fat in the diet of the southern families. In most diets the consumption of fat might well have been lower, inasmuch as most fatty foods contribute little of other nutrients. Butter and cream, rich in vitamin A value, are striking exceptions.

Sugars tend to be somewhat more prominent as a source of energy than the 10 to 12 percent recommended by Rose for adequate diets. Commercial sugars supply food energy, but none of the needed proteins, minerals, and vitamins. Hence, they should not feature too largely in any diet, or displace the important protective foods.

Grain products, the mainstay of the low-cost diet, supplied 30 to 33 percent of the calories for most groups. This is at the lower end of the range of 30 to 40 percent which Rose suggests for an economical diet. The figures for Mountain and Pacific diets were slightly lower still, with averages of 27 and 29 percent, respectively. These correspond to the allowance in Rose's plan for a moderate-cost diet.

Fruits and vegetables, including potatoes and dried legumes, supplied from 13 to 15 percent of the calories in the case of white families, except in one region. This approximates closely the proportion Rose suggested for an economical diet. In the diets of Pacific coast families, fruits and vegetables supplied about 17 percent of the total calories, a figure which corresponds to Rose's plan for a moderate-priced diet. Southern Negro families obtained only 11 percent of their total calories from fruits and vegetables, but the varieties which they chose were rich in minerals and vitamins and helped compensate for the small quantity.

The comparison of these selected diets with Rose's working plans indicates that American diets tend to be relatively high in the flavorful meats, fats, and sugars and relatively low in milk products, fruits, and vegetables other than potatoes. Certain vegetables make significant contributions to the calcium and vitamin A values of diets, nutrients so often supplied in suboptimal quantities in American diets that the foods rich in them have been named "protective foods." Freer use of grain products, especially in their less highly refined forms in place of part of the refined sugars and fats, would also contribute to the enrichment of diets in important nutrients, especially iron and vitamin B_1.

The average calorie value of the diets and the percentage of the total calories furnished by specified classes of food are given in table 68 for families in each region, by season, and by level of food expenditure. The figures show that the proportion of calories which these families derived from various types of foods depended to some extent on how much they spent for all food and the part of the country in which they lived.

In all regions and whatever the food expenditure, the largest share of total calories was obtained from grain products, but with increasing expenditures for food, the proportion tended to decline. This trend reflects the fact that families with more money to spend for food buy little more of grain products but much more of some other types of food than do their neighbors in more straitened circumstances. In general, the percentage of calories from grain products averaged highest in the diets of North Atlantic, East North Central, and southern Negro families, and lowest in the diets of Mountain and Pacific families.

Fats were usually the second most important source of calories in the diet of each group. The figures for any one region varied but little with different expenditures for food, but differed widely from region to region. Among southern Negro families 24 to 32 percent of total calories was from these foods. In contrast to this are the diets of North Atlantic families, in which fat supplied from 12 to 17 percent of the total calories.

For some groups of families sugars ranked third as a source of food energy, generally averaging from 10 to 15 percent of the total calories, at all levels of food expense. For other family groups, especially those with higher food expenditures, a larger share of total calories was derived from eggs and meat than from sugars. In every region, with increasing expenditures for all food, families derived an increasingly larger share of their calories from eggs, meat, poultry, and fish.

Milk, cheese, and ice cream furnished as little as 2 percent of the food energy in the low-cost diets of southern Negro families and as much as 16 percent in the diets of families living in the Mountain region. Average figures for various season and expenditure groups differed considerably from region to region. In the South, where the consumption of milk at low food-expenditure levels was less than in other regions, the share of calories from milk tended to increase as more money was spent for food. In other regions the level of food expenditure made little difference in the average proportion of calories from milk.

Potatoes, mature beans and peas, and nuts usually contributed less than 10 percent of the total calories, the proportion tending to decrease slightly with increasing food expenditures. In low-cost diets of all regions except the Mountain and Pacific, these foods furnished more of the calories than all other vegetables and fruits combined. But when $2.50 or more a week was spent for the food of each person, the share of calories from fruits and other vegetables equalled, and in some cases exceeded, that from potatoes and dried beans, peas, and nuts.

Fruits and the succulent vegetables contributed a larger share of calories, averaging 8 to 12 percent, in diets of Pacific coast families than in those of other regional groups, but consumption of fruits and vegetables was relatively high also in the cities of the Mountain region. Everywhere the proportion of calories from fruits and vegetables, other than potatoes and dried legumes, was found to increase with increasing expenditure for food.

Miscellaneous food, prepared dessert mixtures, soups, cocoa, proprietary foods, and the like, were relatively unimportant as sources of food energy, furnishing less than 2 percent of the total calories.

PROPORTION OF FOOD MONEY ALLOCATED TO DIFFERENT FOODS

Another measure of the prominence of different kinds of food in the diet is the proportion of money spent for each. The shifts which accompany expanding food budgets are not always in the same direction for different population groups, nor does the direction necessarily follow the change in total consumption or total expenditure.

Milk is a case in point. For certain groups of families milk consumption increased at the same rate or more slowly than did expenditures for food; hence, the proportion spent for milk remained constant or decreased. This was true for families in the North and West, as shown in table 54. On the other hand, families in the East South Central region, both white and Negro, increased their consumption of and expenditures for milk more rapidly than for all foods combined, because at the lower levels of food expenditure they were very inadequately supplied with milk. Hence, with increasing expenditures for all foods this group spent a higher percentage as well as a larger total amount for milk. Percentages, of course, are only relative figures and are not to be confused with actual expenditures.

TABLE 54.—*Estimated per-capita consumption of milk*[1] *in a year, and proportion of food money allocated to milk,*[2] *by regional groups and by level of expenditure for food*

Weekly per-capita expenditure[3] for food	Consumption of milk by—				Proportion of food money allocated to milk by—			
	North Atlantic white families	Pacific white families	East South Central white families	Southern Negro families	North Atlantic white families	Pacific white families	East South Central white families	Southern Negro families
	Quarts	*Quarts*	*Quarts*	*Quarts*	*Percent*	*Percent*	*Percent*	*Percent*
$0.63–$1.24			57	30			9	5
$1.25–$1.87	123	126	113	57	16	15	12	6
$1.88–$2.49	146	168	144	84	14	15	13	6
$2.50–$3.12	176	179	227	137	14	12	16	9
$3.13–$3.74	181	218			12	11		
$3.75–$4.37	212	208			13	9		

[1] Including the milk equivalent of cheese and ice cream.
[2] Including cheese and ice cream.
[3] See footnote 1, table 3.

Table 55, referring to Pacific coast cities, shows the effect of increased expenditures for food on the proportion allocated to different types of food. There was a downward trend in the percentage spent for milk, grain products, potatoes and mature beans, peas, and nuts. There was an upward trend in the proportion spent for eggs, meat, poultry, and fish, and for succulent vegetables and fruits. The proportion spent for fats, sugars, and miscellaneous items remained fairly constant at all levels of expenditure.

TABLE 55.—*Proportion of money for food allocated to specified items by families in Pacific cities*

Weekly per-capita expenditure [1] for food		Records	Proportion allocated to—							
Range	Average		Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
	Dollars	*Number*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
$1.25–$1.87	1.58	21	15	23	12	3	18	4	18	7
$1.88–$2.49	2.14	137	15	24	11	4	15	4	20	7
$2.50–$3.12	2.76	132	12	26	12	4	15	4	19	8
$3.13–$3.74	3.30	76	11	26	13	4	14	3	21	8
$3.75–$4.37	4.03	37	9	30	12	4	13	2	22	8

[1] See footnote 1, table 3.

Table 69 shows, by season, the average percentage of the food money allotted to specified classes of food by families in each region spending different amounts for food. In the four regions for which year-round data were available the season of the year did not appear to influence the distribution of the food money to any great extent. There was a tendency, however, to spend a somewhat larger share of the total for fruits and vegetables in summer and for eggs, meat, poultry, and fish in winter. With respect to other food classes, no differences were observed which were consistent at different levels of food expenditure.

TABLE 56.—*Proportion of money allocated to specified items, by color of family and region*

Color of family and region	Records	Median expenditure a person a week	Proportion allocated to—							
			Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White:	*Number*	*Dollars*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
North Atlantic	843	2.75	14	33	9	3	17	3	16	5
East South Central	282	2.10	13	24	14	6	15	4	17	7
Pacific	441	2.85	12	25	12	4	14	4	21	8
Negro:										
South	222	1.55	6	31	20	6	16	5	12	5

In three regions, as shown in table 56, eggs, lean meat, poultry, and fish took the largest single share of the food dollar. For these foods was spent from an average of 24 percent in East South Central cities to an average of 33 percent in North Atlantic cities. Among white families grain products and fruits and vegetables other than potatoes and legumes are found competing for the second largest share. They took, respectively, 14 to 17 and 16 to 21 percent of the total money spent for food. Southern Negro families, however, spent more of their food money for fats and fat meats than for either grain products or fruits and vegetables. The proportion allotted by white families for milk, cheese, and ice cream ranged from 12 to 14 percent; for fats, 9 to 14 percent. Potatoes and dried legumes, sugars, and miscellaneous foods each took considerably less than 10 percent of the total money.

It is instructive to compare the distribution of the food money found in this study with the suggestion of Sherman (*45, p. 536*), that—

> Whatever the level of expenditure * * * (1) at least as much should be spent for milk (including cream and cheese if used) as for meats, poultry, and fish; and (2) at least as much should be spent for fruits and vegetables as for meats, poultry, and fish.

If the share of the money spent by these white families for eggs, usually about 5 percent, be deducted from the total for eggs, meat, poultry, and fish, the proportion allotted to meat, poultry, and fish alone was from a fifth to a fourth of the food money. This is considerably above the 12 to 14 percent allotted to milk, cheese, and ice cream. On the other hand, it is about the same as the proportion spent for fruits and vegetables, 19 to 25 percent.

The average figures for Negro families—with 31 percent of the food expenditures for eggs, meat, poultry, and fish, only 6 percent for milk, and 17 percent for fruits and vegetables—show a wider deviation than do those of white families from Sherman's plan for applying our newer knowledge of nutrition.

QUANTITIES OF DIFFERENT KINDS OF FOOD

No one of the natural plant or animal products appropriated by man for food was designed for the complete nourishment of the human being. Many common articles of food supply only a limited number of man's nutritional needs, and the proportions in which the nutrients are supplied seldom fit the pattern of man's rounded requirements. These facts are not to the discredit of any food. They merely mean that man must discover proper combinations of food, so that what is lacking in one may be supplied by another.

In connection with the slogan "Eat what you want after you have eaten what you should," McCollum and Becker (*30*) specify the following "shoulds," designed to make good the shortages in minerals and vitamins likely to characterize ordinary diet:

> Everyone should take daily throughout life approximately the equivalent of a quart of milk.
>
> Once a day take a liberal serving of greens or potherbs.
>
> Twice each day a salad should be eaten.

These recommendations outline a diet considerably more liberal in minerals and vitamins than the minimum specifications for a good diet adopted in this study. Yet with food prices and food choices as they were in 1935, many families failed to obtain food combinations which would meet even these minimum specifications.

Table 57 compares the range in average quantities of different types of food appearing in diets of different regions, and in those diets graded good, with the quantities included in the plans for adequate diets suggested by the Bureau of Home Economics.

Average diets included fewer eggs than diets graded good, from one-half to two-thirds as much milk, and less than two-thirds as much of vegetables and fruits. They also contained much smaller average quantities of milk, vegetables, and fruits than the range of quantities suggested in the Bureau's diet plans.

Table 57.—*Range in estimated quantities of specified foods a person a year, in average diets and in diets classed as good, compared with plans for adequate diets*

Item	Eggs	Milk or its equivalent [1]	Butter	Tomatoes, citrus fruit	Leafy, green, and yellow vegetables [2]	Other vegetables and fruits [3]
Diets of families:	*Dozen*	*Quarts*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Averages [4]	10–27	51–188	7–22	20–127	60–122	93–305
Graded good [5]	18–32	114–273	14–18	31–296	128–263	174–473
Plans for adequate diets [6]	15–30	260–305	20–35	60–110	170–180	185–425

[1] See footnote 2, table 10.

[2] Does not include sweetpotatoes.

[3] Does not include potatoes, sweetpotatoes, mature dry legumes. Includes fresh fruit equivalent of dried fruits.

[4] Range of averages referring to all white families studied in North Atlantic, East North Central, East South Central, and Pacific cities and to Negro families in South.

[5] Range of averages referring to families in 4 regions spending less than $3.13 a person a week for food.

[6] Based on quantities suggested for adequate diets at three food-expenditure levels.

The wide range in the quantities of each type of food appearing in the diets rated good, as well as in the diet plans, gives some idea of how flexible food combinations may be and still meet the specifications for a nutritionally adequate diet. There is, of course, a limit below which the protective foods—milk, eggs, vegetables, and fruits—cannot fall and yet provide the essential minerals and vitamins.

The diets called good in this report contain less milk in its various forms and, at the lower range, fewer vegetables and fruits than many experts in the field of nutrition consider desirable. Good diets differ from average chiefly in their higher content of milk, fruits, and vegetables, especially of the leafy, green varieties.

Although considerably different in character, the good diets cost little more than average diets at any given expenditure level. This indicates that with careful choice of food the quality of a diet can be much improved without involving additional expense.

Four approaches have been made to an appraisal of present dietary habits in the light of economical application of present knowledge of nutrition: (1) A consideration of what foods give outstanding returns in nutrition for a given expenditure; (2) a comparison of the composition of various diets as shown by distribution of calories, with diet plans suited to different economic levels; (3) a comparison of the prominence of different foods as shown by the allocation of expenditures with a suggested spending pattern; (4) a comparison of the quantities of different types of food in average diets, and in diets graded good, with the quantities listed in plans for an adequate food supply.

Each of the four approaches indicates that greater emphasis might well be put on milk in its several forms, and on green, leafy, and yellow vegetables. In addition more potatoes, dried legumes, and more whole grains rather than only highly refined flour and cereals would do much to make good the present-day dietary deficiencies. Selecting foods that give excellent returns in nutritive value for the amount of money available for food can improve the diet for many families even without additional outlay for food.

SUMMARY

This circular presents information on expenditures for food by families of wage earners and low-salaried clerical workers, the quantities of different kinds of food purchased, and the nutritive adequacy of diets. It is based on dietary records covering 1 week each, obtained during the period December 1934–February 1937, in 43 industrial centers in 8 major geographical regions of the United States. Most of the records were obtained from white families; some, however, were also obtained from Negro families in Middle Atlantic and southern cities.

The data on food consumption were obtained by means of an initial and final inventory, by weight, of the food that the families had on hand, together with daily records of the food brought into the house during the week. Each food record provided information on income for the preceding 3 months, the number of meals served to each household member, and, as a basis for estimating the food needs, information concerning the age, sex, and activity of each member.

About 4,000 records were analyzed. They were classified by region, color of family, and season; in addition they were grouped into 10 categories according to level of expenditure for food on both a per-person and a food-expenditure-unit basis.

Most families spent between 25 and 40 percent of their income for food. Money expenditures for food rose with increased economic well-being whether measured by expenditures for all goods and services per consumption unit or by income per capita.

Food expenditures of $1.25–$1.87 a person a week were supported by family incomes averaging $5 to $6 a person a week; food expenditures of $2.50–$3.12, by average weekly incomes of $8 to $10 a person.

Regional differences in the general level of food expenditures by the families studied are reflected in the medians for each group. For white families these ranged from $2.10 a person a week in East South Central cities to $2.85 on the Pacific coast; for Negro families, from $1.55 a person a week in southern cities to $2.40 a person a week in Middle Atlantic cities. As can be seen in the ogives in the text, families in the middle half of the food-expenditure range spent, a person a week, the following amounts:

White:	
North Atlantic	$2. 15–$3. 50
East North Central	2. 10– 3. 35
West North Central	2. 20– 3. 60
South Atlantic	2. 00– 3. 10
East South Central	1. 60– 2. 75
West South Central	1. 85– 3. 00
Mountain	2. 00– 3. 00
Pacific	2. 25– 3. 60
Negro:	
Middle Atlantic	1. 75– 3. 65
South	1. 05– 2. 15

Rising expenditures for food meant increased purchases of nearly all kinds of food. The increments were most pronounced in the case of milk, butter, cream, eggs, meat, fruits, and succulent vegetables, and least for grain products, sugars, and fats other than butter and cream. For example, families in North Atlantic cities spending $3.75–$4.37 a person a week for food, purchased from two to three times as much butter, eggs, succulent vegetables, and meat, poultry, and fish as families spending $1.25–$1.87. The figures for fruit were three to five times as high at the higher expenditure level, but for grain products and fats other than butter, only about one-third higher.

The year-round figures in this summary refer to families living in cities of the North Atlantic, East North Central, East South Central, and Pacific regions, inasmuch as only in these cities were enough records obtained to draw reliable averages.

By region, purchases of eggs varied from an average of 27 dozen a person a year among white families in Pacific cities to about 10 dozen among southern Negroes. In every region families spending a small amount of money for food used only a small quantity of milk. Average purchases of milk products by southern white families whose median food expenditures were $2.10 a person a week, were equivalent to 138 quarts a person a year and by Negro families with median expenditures of $1.55, to 51 quarts. These figures may be contrasted with 188 quarts, the equivalent purchased by families in Pacific cities with median food expenditures of $2.85 a person a week.

The consumption of all fats was lowest among families in North Atlantic cities, with average purchases of 40 pounds a person a year, and highest in the South with averages of 62 pounds for white families and 70 pounds for Negro families. Butter purchases were highest in North Atlantic and Pacific cities, with averages of 21 and 22 pounds a person a year, respectively. Southern white families bought an average of only 8 pounds of butter, but they bought from two to four times as much lard and salt pork as other white families.

The consumption of meat, poultry, and fish was highest in North Atlantic cities, where families purchased an average of 139 pounds a person a year. Only slightly less were the quantities purchased by white families in East North Central and Pacific cities and by southern Negro families, but a lower level, 83 pounds, was characteristic of southern white families.

The purchases of grain products ranged from a high of 196 pounds a person a year by southern Negroes to a low of 160 pounds by Pacific coast families. Southern white families purchased from two to three times as much flour and corn meal as those in the other three regions, but much less of their grain products in the form of bread and other baked goods.

More potatoes were purchased in North Atlantic cities than elsewhere. The average was 153 pounds of potatoes and 4 pounds of sweetpotatoes a person a year. Southern Negro families bought an average of 42 pounds of potatoes and 49 pounds of sweetpotatoes.

The average purchases of succulent vegetables (other than potatoes, sweetpotatoes, and dry mature legumes), ranged from about 240 pounds a person a year in Pacific coast cities to 135 pounds by southern Negro families. Pacific coast families bought from two to three times as much of citrus fruits and about twice as much of other fruits as white families in other regions. Negro families in southern cities bought an average of only 6 pounds of citrus fruits a person a year and 54 pounds of other kinds of fruits. These figures are exceptionally low.

In a seasonal comparison of the quantities of foods purchased by families in three regions, the figures for meat, poultry, and fish were found to be slightly higher in winter and of fruits and vegetables in summer, than in other seasons. With respect to other foods little seasonal difference was observed.

The nutritive value of the food was estimated by applying average figures on composition to the data on consumption. The average content of diets was computed in calories, protein, calcium, phosphorus, iron, vitamin A value, vitamin B_1, ascorbic acid (vitamin C), riboflavin, and the pellagra-preventive factor. The data are presented on both a per-capita and a nutrition-requirement unit basis. Comparison of the average nutritive values of the diets with suggested daily allowances for each unit are made; and the distributions of diets by the quantities of the nutrients furnished are presented for three levels of food expenditure.

When food expenditures were as low as \$1.25–\$1.87 a person a week, diets were rather restricted in many families. In the North Atlantic region, for instance, the average energy value of the diets of white families was 2,530 calories a requirement unit a day as compared with 3,000 calories, the point of reference. Almost 40 percent of the diets furnished less than 2,400 calories. The diets of North Atlantic families averaged per nutrition-requirement unit per day, 64 g of protein, 0.44 g of calcium, 1.07 g of phosphorus, 11.3 mg of iron, 2,100 International Units of vitamin A value, 340 International Units of vitamin B_1, 41 mg of ascorbic acid, 470 Sherman units of riboflavin, and 20 percent more than the minimum quantity of pellagra-preventive factor. These average nutritive values for the North Atlantic families were typical of those of white families at this food-spending level in other regional groups. At this level of expenditure for food, southern Negro families procured diets with somewhat higher average values of all essential nutrients.

With \$2.50–\$3.12 a person a week for food, North Atlantic families purchased food with higher average nutritive value than at lower food expenditure levels. Per nutrition-requirement unit a day, their diets averaged 3,320 calories, 88 g of protein, 0.65 g of calcium, 1.46 g of phosphorus, 15.4 mg of iron, 3,400 International Units of vitamin A value, 500 International Units of vitamin B_1, 70.5 mg of ascorbic acid, 700 Sherman units of riboflavin, and 90 percent more than the minimum quantity of the pellagra-preventive factor. For the other regional groups, there were increases of about the same order of magnitude in average nutritive values of diets.

Among the families with fairly liberal amounts of money for food, the food-energy values of the diets frequently averaged more than 3,600 calories a unit a day, levels suggestive of considerable food waste.

If all of the white families represented by this study were arrayed according to the protein content of their diets, it is estimated that the lowest 25 percent would be found receiving 70 g of protein or less, a requirement unit a day; and the lowest 75 percent, 95 g of protein or less. For calcium, comparable figures would be 0.50 g or less, and 0.83 g or less, a requirement unit a day; for iron, 14 mg or less, and

17 mg or less, respectively. Of vitamin A, the lowest 25 and 75 percent of the families probably would be found receiving, respectively, 2,000 International Units, or less, and 4,500 units or less, per requirement unit daily. Of vitamin B_1, comparable figures would be 400 International Units or less, and 600 International Units or less per requirement unit daily; for ascorbic acid (vitamin C), less than 50 and 100 mg, respectively; and for riboflavin, 550 Sherman units or less and 900 Sherman units or less, respectively, a requirement unit a day.

Less than 2 percent of these families purchased food furnishing less than 45 g of protein a requirement unit a day, about the minimum requirement level, and about 75 percent of the families procured food with 70 g or more of protein. It would appear that there was little likelihood of a deficiency in the quantity of protein in diets of many of the families of employed workers. The diets were more likely to be adequate in phosphorus than in calcium. The average phosphorus content of the diets of all regional groups was above a gram a unit a day, regardless of level of expenditure for food. Less than half of the white families purchased food supplying as much as 0.70 g or more of calcium a unit a day, a safe allowance, and about one-sixth had diets furnishing less than the average minimum requirement of 0.45 g of calcium a day. About half of the diets supplied 15 mg or more of iron a unit a day, and less than 5 percent failed to provide 10 mg.

About a third of the white families included in this study obtained diets high enough in average vitamin A value to insure good visual adaptation in semidarkness. The diets of more than a fifth of the families furnished the liberal allowance of 6,000 or more International Units of vitamin A a requirement unit a day.

About 10 percent of the white families selected foods which furnished less than 300 International Units of vitamin B_1 a requirement unit a day, while the diets of about half furnished 500 International Units or more a requirement unit a day. The relation of these limits to minimal or optimal allowances is not known.

To about 10 percent of the white families the food before cooking furnished less than 37 mg of ascorbic acid a unit a day, and to somewhat less than half, 75 mg or more. Data are not available from which to estimate the quantity destroyed in food preparation.

Riboflavin appears to be fairly well supplied in average diets. Only about 1 percent of the diets of white families furnished less than 300 Sherman units, while 80 percent contained 500 Sherman units or more a requirement unit a day.

The pellagra-preventive factor appears to be amply supplied except in the Southeast, where the deficiency among low income groups is serious.

The nutritive values of diets of these city families seem to vary little from season to season. They tend, however, to be highest in calories, protein, phosphorus, iron, vitamin B_1, and riboflavin in the fall and winter, highest in vitamin A value in the spring, and highest in ascorbic acid in summer.

The diets of families in different regions were classified as good, fair, or poor, according to their nutritive content per requirement unit. At each important level of expenditure for food, all grades of diet were found, but the percentage that fell in the higher grades increased with rising expenditures for food. From 40 to 60 percent of the diets of white families, in the four regions from which most extensive data were obtained, were found to be in need of improvement. Over 60 percent of the diets of Negro families in the South were in this class. No white families succeeded in obtaining diets which could be classified above the poor grade when they spent, a person a week, less than $1.60 in North Atlantic cities; $1.55 in East North Central; $1.00 in East South Central; or $1.60 in Pacific cities; and no Negro families in the South, when they spent less than $0.95. However, many families spending more than these sums obtained poor diets.

The chances for better diets increased with rising per-capita expenditures for foods. This was due chiefly to a more liberal use of milk, meat, eggs, leafy, green vegetables, and fruits, when more money was available. But the quality of the food supply selected by families was by no means only a matter of level of food expenditure. At every expenditure level above a certain minimum, some families succeeded in obtaining good diets but others procured food only fair or poor from the standpoint of nutritive value. For example, with an expenditure of $2.50 a person a week for food, 32 percent of the families in East South Central cities bought good diets, while another 37 percent obtained diets that were classed as poor.

With the dietary habits and the retail price levels of 1935 the level of food expenditure above which families were able to purchase adequate diets was different for each region. For white families the figure was $2.75 a week in North Atlantic cities; $2.70 in East North Central; $2.15 in East South Central; and $2.60 in Pacific cities. For Negro families in the South, the figure was $1.90 a person a week. Of every 10 white families spending these amounts or more, only from 2 to 4 selected good diets. Among Negro families in the South, the proportion was a little over 3 families in every 10.

Compared with Rose's working plans for economical adequate diets, the diets of the families included in this study tend to be relatively high in the flavorful fats, sugars, meat, poultry, and fish, but low in milk products, fruits, and vegetables other than potatoes.

In all regions and whatever the level of food expenditure, the largest share of the calories was derived from grain products. The averages ranged from 42 percent in diets of southern white families spending $0.63–$1.24 a person a week for food to 21 percent in diets of families in Pacific cities, spending over $4.37 a person a week. Fats were usually the second most important source of calories. To southern Negro families they furnished from 24 to 32 percent of the calories, and among North Atlantic families 13 to 20 percent. Among some groups, sugars ranked third as a source of energy—for others, especially at the higher levels of expenditure, eggs, meat, poultry, and fish were third in importance. These food choices tend to crowd out the protective foods—fruits, vegetables, and dairy products.

Compared with Sherman's suggestion for an economical application of our newer knowledge of food values, the allocation of money for different types of food is out of line. He suggests that as much be spent for milk and cheese, and also for vegetables and fruits as for meat, poultry, and fish. In contrast, the white families included in this study spent from one-fourth to one-third of their food money for eggs, lean meat, poultry, and fish; from one-fifth to one-fourth for vegetables and fruits; but only one-eighth to one-sixth for milk and cheese. The Negro families spent almost one-third for eggs, meat, poultry, and fish, about one-sixth for vegetables and fruits, and only 6 percent for milk.

Average diets included fewer eggs, from one-half to two-thirds as much milk and less than two-thirds as much of vegetables and fruits as did diets graded good. But even these good diets fell short of the allowances of these protective foods believed by many authorities to be optimal. Modification of present-day diets so as to improve their nutritive qualities without adding much to the outlay for food is chiefly a matter of putting considerably more emphasis upon leafy and green-colored vegetables and upon milk. Many of the inexpensive varieties and forms of these foods yield excellent returns in nutritive value for their cost.

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APPENDIX

TABLE 58.—*Number of records accepted in which weekly expenditures for food, per capita, were within specified amounts, by region, color of family, and season*

Region, color of family, and season	Records in which weekly food expenditure[1] per capita was found to be—										Total
	Under $0.63	$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37	$4.38–$4.99	$5.00–$5.62	$5.63 and over	
New England:[2]	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
White:											
Winter 1934–35	0	0	17	32	31	19	10	2	0	1	112
Spring 1935	0	1	27	47	47	32	17	7	3	4	185
Summer 1935	0	1	18	44	55	31	20	10	2	5	186
Fall 1935	0	1	17	40	39	26	13	6	4	2	148
Winter 1935–36	0	0	3	7	7	6	4	0	0	0	27
All seasons	0	3	82	170	179	114	64	25	9	12	658
Middle Atlantic:[3]											
White:											
Winter 1934–35	0	1	11	25	19	17	12	5	4	3	97
Spring 1935	0	1	20	48	45	35	10	7	5	3	174
Summer 1935	0	1	16	43	25	17	10	7	3	7	129
Fall 1935	0	0	16	34	38	17	8	6	5	1	125
Winter 1935–36	0	3	12	53	46	45	29	12	8	9	217
All seasons	0	6	75	203	173	131	69	37	25	23	742
Middle Atlantic:[4]											
Negro:											
Winter 1934–35	0	1	5	9	3	2	2	1	1	0	24
Spring 1935	0	3	6	4	1	3	2	1	1	1	22
Fall 1935	0	0	4	2	5	2	2	4	4	0	23
Winter 1935–36	0	1	8	9	4	2	2	1	0	1	28
All seasons	0	5	23	24	13	9	8	7	6	2	97
East North Central:[5]											
White:											
Winter 1934–35	0	0	2	7	4	1	2	1	0	0	17
Spring 1935	0	2	14	34	22	18	8	3	1	4	106
Summer 1935	0	0	11	18	18	8	6	1	2	1	65
Fall 1935	0	0	2	8	4	4	1	3	2	1	25
Winter 1935–36	0	1	4	9	10	5	3	0	0	0	32
Spring 1936	0	3	28	44	63	39	9	12	3	2	203
Summer 1936	0	3	18	20	26	14	15	3	1	1	101
Fall 1936	0	0	21	30	25	11	7	2	3	0	99
Winter 1936–37	0	3	4	19	20	7	6	6	1	3	69
All seasons	0	12	104	189	192	107	57	31	13	12	717
West North Central:[6]											
White:											
Spring 1936	0	1	22	33	33	25	14	12	3	1	144
Summer 1936	0	0	2	13	16	12	6	2	1	2	54
All seasons	0	1	24	46	49	37	20	14	4	3	198
South Atlantic:[7]											
White:											
Spring 1935	0	2	9	13	10	3	1	1	0	0	39
Summer 1935	0	0	6	8	5	3	1	0	0	0	23
Fall 1935	0	2	11	19	22	12	5	2	1	0	74
Winter 1935–36	0	0	3	7	8	3	0	2	0	0	23
Spring 1936	0	0	15	28	18	13	6	4	1	1	86
Summer 1936	0	0	4	1	5	1	5	0	0	0	16
All seasons	0	4	48	76	68	35	18	9	2	1	261
East South Central:[8]											
White:											
Spring 1935	0	8	41	30	15	10	5	1	1	0	111
Summer 1935	1	13	37	48	19	5	5	1	1	0	130
Fall 1935	1	4	29	29	19	11	5	1	0	1	100
Winter 1935–36	0	8	26	19	18	9	4	1	0	0	85
All seasons	2	33	133	126	71	35	19	4	2	1	426

See footnotes at end of table.

TABLE 58.—*Number of records accepted in which weekly expenditures for food, per capita, were within specified amounts, by region, color of family, and season*—Continued

Region, color of family, and season	Records in which weekly food expenditure per capita was found to be—										Total
	Under $0.63	$0.63–$1.24	$1.25–$1.87	$1.88–$2.49	$2.50–$3.12	$3.13–$3.74	$3.75–$4.37	$4.38–$4.99	$5.00–$5.62	$5.63 and over	
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
South:[9]											
Negro:											
Winter 1934–35	0	4	5	3	0	1	1	0	0	1	15
Spring 1935	1	24	28	17	3	1	1	1	0	0	76
Summer 1935	0	34	40	10	11	3	1	0	0	0	99
Fall 1935	1	41	26	18	12	9	1	1	0	0	109
Winter 1935–36	0	3	5	1	2	1	0	0	0	0	12
All seasons	2	106	104	49	28	15	4	2	0	1	311
West South Central:[10]											
White:											
Spring 1936	0	1	16	26	11	10	6	2	2	0	74
Summer 1936	0	1	6	5	4	1	0	0	0	0	17
All seasons	0	2	22	31	15	11	6	2	2	0	91
Mountain:[11]											
White:											
Spring 1935	0	0	1	15	14	3	3	3	0	0	39
Summer 1935	0	3	16	29	20	11	5	2	1	0	87
Fall 1935	0	2	5	12	5	2	1	0	0	0	27
Spring 1936	0	0	2	3	5	1	2	1	0	1	15
All seasons	0	5	24	59	44	17	11	6	1	1	68
Pacific:[12]											
White:											
Spring 1935	0	0	10	28	40	20	17	5	7	4	131
Summer 1935	1	3	18	70	65	40	22	12	6	6	243
Fall 1935	0	0	10	41	35	33	14	7	3	3	146
Winter 1935–36	0	1	17	40	46	23	22	8	8	3	168
All seasons	1	4	55	179	186	116	75	32	24	16	688
Grand total:											
White	3	70	567	1,079	977	603	339	160	82	69	3,949
Negro	2	111	127	73	41	24	12	9	6	3	408

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[1] See footnote 1, table 3.

[2] New England cities: Berlin, 32 records; Claremont, 24; Concord, 23; Dover, 31; Keene, 40; Littleton, 25; Manchester, 71; Nashua, 25; Portsmouth, 23; Boston, 192; Springfield, 172 records.

[3] Middle Atlantic cities: New York, 279 records; Rochester, 174; Lancaster, 50; Philadelphia, 166; Pittsburgh, 73 records.

[4] Middle Atlantic cities: New York, 29 records; Philadelphia, 43; Pittsburgh, 25 records.

[5] East North Central cities: Indianapolis, 125 records; Detroit, 105; Grand Rapids, 16; Lansing, 15; Marquette, 14; Cincinnati, 41; Columbus, 288; Milwaukee, 113 records.

[6] West North Central cities: Minneapolis, 78 records; St. Paul, 45; St. Louis, 75 records.

[7] South Atlantic cities: Jacksonville, 79 records; Norfolk, 37; Richmond, 145 records.

[8] East South Central cities: Birmingham, 205 records; Mobile, 70; Memphis, 151 records.

[9] Southern cities: Richmond, 61 records; Birmingham, 102; Mobile, 69; Memphis, 69; New Orleans, 10 records.

[10] West South Central cities: Dallas, 65 records; Houston, 26 records.

[11] Mountain cities: Reno, 78 records; Salt Lake City, 90 records.

[12] Pacific cities: Los Angeles, 227 records; Oakland, 29; Sacramento, 67; San Francisco, 96; Seattle, 269 records.

TABLE 59.—*Number of records accepted in which weekly expenditures for food, per food-expenditure unit, were within specified amounts, by region, color of family, and season*

Region, color of family, and season	Records [1] in which weekly food expenditure [2] per food-expenditure unit was found to be—										Total
	Under $0.67	$0.67–$1.32	$1.33–$1.99	$2.00 $2.66	$2.67–$3.32	$3.33–$3.99	$4.00–$4.66	$4.67–$5.32	$5.33–$5.99	$6.00 and over	
New England:	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
White:											
Winter 1934–35	0	0	14	33	35	19	8	2	0	1	112
Spring 1935	0	1	21	52	51	32	14	9	2	3	185
Summer 1935	0	0	14	44	52	36	25	9	1	5	186
Fall 1935	0	1	17	42	38	23	13	10	2	2	148
Winter 1935–36	0	0	1	10	6	6	3	1	0	0	27
All seasons	0	2	67	181	182	116	63	31	5	11	658
Middle Atlantic:											
White:											
Winter 1934–35	0	1	10	21	21	20	10	6	6	2	97
Spring 1935	0	1	20	44	49	33	12	9	3	3	174
Summer 1935	0	1	14	39	30	15	13	7	4	6	129
Fall 1935	0	0	10	37	34	24	7	9	3	1	125
Winter 1935–36	0	3	14	43	44	53	28	14	8	10	217
All seasons	0	6	68	184	178	145	70	45	24	22	742
Middle Atlantic:											
Negro:											
Winter 1934–35	0	2	4	8	4	2	2	1	1	0	24
Spring 1935	0	3	5	5	1	5	0	1	1	1	22
Fall 1935	0	0	4	3	5	2	4	2	2	1	23
Winter 1935–36	0	1	8	8	5	3	1	1	0	1	28
All seasons	0	6	21	24	15	12	7	5	4	3	97
East North Central:											
White:											
Winter 1934–35	0	0	2	6	4	2	3	0	0	0	17
Spring 1935	0	1	12	31	27	19	9	2	1	4	106
Summer 1935	0	1	9	18	16	13	5	1	1	1	65
Fall 1935	0	0	2	8	4	2	5	3	0	1	25
Winter 1935–36	0	1	6	7	12	4	2	0	0	0	32
Spring 1936	0	1	27	45	64	35	16	8	4	3	203
Summer 1936	0	4	15	23	24	16	13	4	1	1	101
Fall 1936	0	2	18	22	30	12	9	3	3	0	99
Winter 1936–37	0	3	5	15	23	8	5	6	3	1	69
All seasons	0	13	96	175	204	111	67	27	13	11	717
West North Central:											
White:											
Spring 1936	0	1	20	24	40	35	11	10	2	1	144
Summer 1936	0	0	2	12	16	15	4	3	0	2	54
All seasons	0	1	22	36	56	50	15	13	2	3	198
South Atlantic:											
White:											
Spring 1935	0	1	8	17	8	3	1	0	0	1	39
Summer 1935	0	0	4	10	5	3	1	0	0	0	23
Fall 1935	0	1	12	19	22	10	5	4	1	0	74
Winter 1935–36	0	0	2	9	6	4	1	1	0	0	23
Spring 1936	0	1	13	23	25	11	5	6	1	1	86
Summer 1936	0	0	2	3	5	2	3	1	0	0	16
All seasons	0	3	41	81	71	33	16	12	2	2	261
East South Central:											
White:											
Spring 1935	0	8	40	28	17	12	5	0	1	0	111
Summer 1935	1	12	35	46	22	9	3	2	0	0	130
Fall 1935	1	5	28	28	19	10	6	2	0	1	100
Winter 1935–36	0	7	25	20	21	6	4	2	0	0	85
All seasons	2	32	128	122	79	37	18	6	1	1	426

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[1] For number of records collected by cities, see footnotes to table 58.
[2] See footnote 1, table 3.

TABLE 59.—*Number of records accepted in which weekly expenditures for food, per food-expenditure unit, were within specified amounts, by region, color of family, and season*—Continued

Region, color of family, and season	Records in which weekly food expenditure per food-expendiure unit was found to be—										Total
	Under $0.67	$0.67–$1.32	$1.33–$1.99	$2.00–$2.66	$2.67–$3.32	$3.33–$3.99	$4.00–$4.66	$4.67–$5.32	$5.33–$5.99	$6 and over	
South:	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Negro:											
Winter 1934–35	0	4	5	3	0	0	2	0	1	0	15
Spring 1935	1	25	27	15	4	1	1	2	0	0	76
Summer 1935	1	28	43	15	8	3	1	0	0	0	99
Fall 1935	1	35	33	20	16	2	1	1	0	0	109
Winter 1935–36	0	1	7	1	2	1	0	0	0	0	12
All seasons	3	93	115	54	30	7	5	3	1	0	311
West South Central:											
White:											
Spring 1936	0	1	13	26	14	10	7	1	2	0	74
Summer 1936	0	1	6	5	4	1	0	0	0	0	17
All seasons	0	2	19	31	18	11	7	1	2	0	91
Mountain:											
White:											
Spring 1935	0	0	1	10	17	5	4	2	0	0	39
Summer 1935	0	2	11	32	21	13	5	2	1	0	87
Fall 1935	0	2	3	15	4	2	1	0	0	0	27
Spring 1936	0	0	2	3	4	2	2	1	1	0	15
All seasons	0	4	17	60	46	22	12	5	2	0	168
Pacific:											
White:											
Spring 1935	0	0	11	21	40	27	15	9	4	4	131
Summer 1935	1	3	17	66	68	43	21	16	3	5	243
Fall 1935	0	0	7	44	35	35	13	5	4	3	146
Winter 1935–36	0	2	12	52	41	20	21	11	6	3	168
All seasons	1	5	47	183	184	125	70	41	17	15	688
Grand total:											
White	3	68	505	1,053	1,018	650	338	181	68	65	3,949
Negro	3	99	136	78	45	19	12	8	5	3	408

Table 60.—*Average household size, weekly income, weekly expenditure for food, and percentage of income allotted to food by families classified by color of family, region, level of expenditure for food, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food,[1] and season	Records included in analysis	Average household size	Average weekly income for preceding 3 months		Average weekly food expenditure		Percentage of income allotted to food
			Per household	Per capita	Per household	Per capita	
White:							
North Atlantic:							
$1.25–$1.87:	*Number*	*Persons*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Percent*
Winter 1934–35	23	6.36	29.07	4.57	9.86	1.55	33.9
Spring 1935	33	5.19	27.51	5.30	8.07	1.55	29.3
Summer 1935	25	6.06	26.43	4.36	9.58	1.58	36.2
Fall 1935	25	6.39	30.21	4.92	10.42	1.64	34.5
Winter 1935–36	11	4.09	22.00	5.38	6.55	1.60	29.8
$1.88–$2.49:							
Spring 1935	73	4.90	31.18	6.57	10.55	2.17	33.8
Summer 1935	66	4.89	30.59	6.26	10.48	2.14	34.3
Fall 1935	59	4.65	32.16	6.93	10.16	2.19	31.6
Winter 1935–36	42	5.37	31.64	6.09	11.85	2.22	37.4
$2.50–$3.12:							
Winter 1934–35	36	4.01	29.55	7.37	10.63	2.65	35.9
Spring 1935	74	3.99	29.93	7.50	11.13	2.79	37.2
Summer 1935	58	3.88	32.01	8.25	10.59	2.73	33.1
Fall 1935	49	4.08	33.62	8.24	11.19	2.75	33.3
Winter 1935–36	36	3.47	34.37	9.61	11.90	3.29	34.6
$3.13–$3.74:							
Spring 1935	48	3.28	28.86	8.15	11.11	3.38	38.5
Summer 1935	32	3.44	33.97	9.88	11.67	3.39	34.4
Fall 1935	27	3.28	30.93	9.49	11.06	3.37	35.8
Winter 1935–36	40	3.46	31.38	8.57	11.96	3.44	38.1
$3.75–$4.37:							
Winter 1934–35	14	3.08	36.99	12.01	11.92	3.87	32.2
Spring 1935	16	2.79	27.05	9.68	11.09	3.90	41.0
Summer 1935	22	3.05	36.48	11.96	12.34	4.05	33.8
Winter 1935–36	17	2.83	39.95	14.12	11.68	4.13	29.2
$4.38 and over:							
Spring 1935	9	2.96	30.74	10.39	13.11	4.42	42.6
Winter 1935–36	8	2.69	35.15	13.07	12.59	4.69	35.8
East North Central:							
$1.25–$1.87:							
Spring 1935	10	4.70	22.69	4.83	7.32	1.56	32.3
Summer 1935	9	5.67	27.93	4.93	8.96	1.58	32.1
Spring 1936	24	4.69	24.43	5.21	7.30	1.56	29.8
Summer 1936	13	5.91	30.03	5.08	9.53	1.61	31.7
Fall 1936	14	4.15	27.76	6.69	6.92	1.67	24.9
$1.88–$2.49:							
Spring 1935	26	4.07	31.10	7.64	8.74	2.15	29.2
Summer 1935	16	4.00	26.43	6.61	8.52	2.13	32.2
Spring 1936	32	4.40	25.92	5.89	9.12	2.07	35.2
Summer 1936	16	3.87	25.17	6.50	8.32	2.15	33.0
Fall 1936	17	3.86	32.44	8.40	8.64	2.24	26.6
Winter 1936–37	12	4.10	34.19	8.34	9.25	2.26	27.0
$2.50–$3.12:							
Spring 1935	17	3.36	34.13	10.16	9.25	2.76	27.1
Summer 1935	14	4.01	28.54	7.12	10.93	2.73	38.3
Spring 1936	45	3.42	27.85	8.14	9.35	2.73	33.6
Summer 1936	18	3.46	33.68	9.73	9.87	2.85	29.3
Fall 1936	20	2.74	29.41	10.73	7.84	2.86	26.7
Winter 1936–37	15	3.23	29.65	9.18	9.45	2.92	31.9
$3.13–$3.74:							
Spring 1935	13	3.27	30.35	9.28	10.92	3.34	36.0
Spring 1936	23	2.88	27.40	9.51	9.79	3.40	35.7
Summer 1936	9	2.81	29.69	10.56	9.75	3.47	32.8
Fall 1936	8	2.52	29.66	11.77	8.61	3.42	29.0
$3.75–$4.37:							
Summer 1936	10	2.51	29.45	11.73	10.51	4.19	35.7
West North Central:							
$1.25–$1.87:							
Spring 1936	16	5.77	31.68	5.49	9.45	1.64	29.8
$1.88–$2.49:							
Spring 1936	17	4.44	26.84	6.04	9.43	2.12	35.1
Summer 1936	10	4.94	30.04	6.08	10.65	2.16	35.5
$2.50–$3.12:							
Spring 1936	26	3.23	29.18	9.03	8.65	2.68	29.6
Summer 1936	11	3.68	31.56	8.58	10.32	2.80	32.7
$3.13–$3.74:							
Spring 1936	23	3.30	35.43	10.74	10.92	3.31	30.8
Summer 1936	9	2.84	34.45	12.13	9.91	3.49	28.8

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[1] See footnote 1, table 3.

TABLE 60.—*Average household size, weekly income, weekly expenditure for food, and percentage of income allotted to food by families classified by color of family, region, level of expenditure for food, and season, December 1934–February 1937*—Contd.

Color of family, region, weekly per-capita expenditure for food, and season	Records included in analysis	Average household size	Average weekly income for preceding 3 months		Average weekly food expenditure		Percentage of income allotted to food
			Per household	Per capita	Per household	Per capita	
White—Continued.							
South Atlantic:							
$1.25–$1.87:	*Number*	*Persons*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Percent*
Fall 1935	9	5.44	31.24	5.74	8.16	1.50	26.1
Spring 1936	11	5.40	34.60	6.41	7.96	1.47	23.0
$1.88–$2.49:							
Fall 1935	15	4.24	34.24	8.08	9.25	2.18	27.0
Spring 1936	19	4.96	32.91	6.64	10.81	2.18	32.8
$2.50–$3.12:							
Fall 1935	18	3.46	32.84	9.49	9.31	2.69	28.3
Spring 1936	16	3.59	39.38	10.97	9.92	2.76	25.2
$3.13–$3.74:							
Spring 1936	10	3.34	39.27	11.76	11.10	3.32	28.3
East South Central:							
$0.63–$1.24:							
Spring 1935	7	5.84	21.14	3.62	6.55	1.12	31.0
Summer 1935	10	5.56	18.85	3.39	5.61	1.01	29.8
$1.25–$1.87:							
Spring 1935	35	4.60	24.65	5.36	7.26	1.58	29.5
Summer 1935	29	5.54	27.69	5.00	8.60	1.55	31.1
Fall 1935	26	5.57	25.76	4.62	8.56	1.54	33.2
Winter 1935–36	24	6.14	30.27	4.93	9.84	1.60	32.5
$1.88–$2.49:							
Spring 1935	21	4.05	26.60	6.57	8.71	2.15	32.7
Summer 1935	36	4.39	32.35	7.37	9.19	2.09	28.4
Fall 1935	25	4.24	32.24	7.60	8.94	2.11	27.7
Winter 1935–36	15	4.44	37.22	8.38	9.67	2.18	26.0
$2.50–$3.12:							
Spring 1935	10	3.32	30.75	9.26	9.24	2.78	30.0
Summer 1935	12	4.23	35.98	8.51	11.55	2.73	32.1
Fall 1935	17	3.24	33.23	10.26	8.88	2.74	26.7
Winter 1935–36	15	3.17	31.61	9.97	8.74	2.75	27.6
West South Central:							
$1.25–$1.87:							
Spring 1936	11	5.06	25.09	4.96	7.37	1.46	29.4
$1.88–$2.49:							
Spring 1936	20	3.42	27.74	8.11	7.01	2.05	25.3
$2.50–$3.12:							
Spring 1936	8	3.32	32.45	9.77	9.00	2.71	27.7
Mountain:							
$1.25–$1.87:							
Summer 1935	10	5.39	27.03	5.01	8.66	1.61	32.0
$1.88–$2.49:							
Spring 1935	9	3.97	24.74	6.23	8.66	2.18	35.0
Summer 1935	23	4.08	28.54	7.00	8.69	2.13	30.5
$2.50–$3.12:							
Spring 1935	11	3.35	27.94	8.34	9.22	2.75	33.0
Summer 1935	14	3.75	32.56	8.68	10.22	2.72	31.4
$3.13–$3.74:							
Summer 1935	9	3.16	37.31	11.81	10.85	3.43	29.1
Pacific:							
$1.88–$2.49:							
Spring 1935	16	3.96	30.10	7.60	8.52	2.15	28.3
Summer 1935	53	3.68	28.85	8.43	7.68	2.11	26.6
Fall 1935	34	3.90	28.77	7.38	8.33	2.14	30.8
Winter 1935–36	34	4.16	32.58	7.83	8.99	2.16	27.6
$2.50–$3.12:							
Spring 1935	29	3.63	30.53	8.41	10.18	2.81	34.5
Summer 1935	50	3.20	31.83	10.11	8.71	2.72	27.4
Fall 1935	23	3.39	31.96	9.43	9.42	2.78	29.5
Winter 1935–36	30	3.46	28.60	8.27	9.42	2.72	32.9
$3.13–$3.74:							
Spring 1935	12	2.68	36.33	13.56	9.11	3.08	25.1
Summer 1935	30	2.66	31.61	11.88	8.86	3.34	28.0
Fall 1935	23	3.08	35.51	11.53	10.23	3.32	28.8
Winter 1935–36	11	2.33	35.70	15.32	8.08	3.47	22.6
$3.75–$4.37:							
Spring 1935	8	2.32	34.09	14.69	9.24	3.99	27.1
Summer 1935	14	1.96	33.61	17.15	7.84	4.00	23.3
Winter 1935–36	15	2.22	32.02	14.42	9.09	4.10	28.4
$4.38 and over:							
Spring 1935	9	1.75	32.76	18.72	9.41	5.39	28.7
Summer 1935	16	2.11	32.49	15.40	10.72	5.08	33.0
Winter 1935–36	13	1.85	37.82	20.44	9.96	5.39	26.3

TABLE 60.—*Average household size, weekly income, weekly expenditure for food, and percentage of income allotted to food by families classified by color of family, region, level of expenditure for food, and season, December 1934–February 1937*—Contd.

Color of family, region, weekly per-capita expenditure for food, and season	Records included in analysis	Average household size	Average weekly income for preceding 3 months		Average weekly food expenditure		Percentage of income allotted to food
			Per household	Per capita	Per household	Per capita	
Negro:							
South:							
$0.63–$1.24:	*Number*	*Persons*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Percent*
Spring 1935	22	5. 22	16. 32	3. 13	5. 17	0. 99	31. 7
Summer 1935	27	5. 29	14. 88	2. 81	4. 98	. 94	33. 5
Fall 1935	35	5. 08	15. 11	2. 97	4. 70	. 93	31. 1
$1.25–$1.87:							
Spring 1935	23	2. 93	14. 49	4. 95	4. 41	1. 50	30. 4
Summer 1935	35	3. 60	17. 48	4. 86	5. 40	1. 50	30. 9
Fall 1935	23	3. 14	15. 91	5. 07	4. 73	1. 51	32. 3
$1.88–$2.49:							
Spring 1935	13	3. 34	21. 82	6. 53	6. 86	2. 05	31. 4
Summer 1935	8	2. 72	25. 83	9. 50	5. 83	2. 14	22. 6
Fall 1935	16	2. 35	17. 27	7. 35	4. 93	2. 10	28. 6
$2.50–$3.12:							
Summer 1935	8	2. 32	19. 88	8. 57	6. 50	2. 81	32. 7
Fall 1935	10	2. 12	20. 09	9. 48	5. 72	2. 70	28. 5

TABLE 61.—*Eggs, milk, and fats: Estimated per-capita consumption in 3 months by color of family, region, level of food expenditure, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food, [1] and season	Records	Eggs	Milk, whole, skim, buttermilk	Milk, evaporated, condensed	Milk, dried, skim, or whole	Cheese	Cream, ice cream	Total fluid milk equivalent [2]	Butter	Other table fats	Cooking or salad oils, dressings	Lard, other cooking fats	Bacon, salt pork, suet	Total fats
White:														
North Atlantic:														
$1.25–$1.87:	*Number*	*Dozen*	*Quarts*	*Pounds*	*Pounds*	*Pound*	*Pounds*	*Quarts*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Winter 1934–35	23	2.7	20	4.8	0	0.9	0	28	4.4	0.6	0.5	1.8	1.3	8.7
Spring 1935	33	4.6	25	4.3	0	1.0	.3	32	3.8	1.4	.7	1.4	.7	8.1
Summer 1935	25	2.9	23	2.5	0	1.1	.6	29	3.5	1.0	1.0	1.2	.6	7.2
Fall 1935	25	3.0	20	4.1	0	1.7	.2	29	4.0	.3	.8	1.0	.6	6.7
Winter 1935–36	11	2.8	32	4.2	0	.8	.8	38	2.1	1.5	1.6	1.0	.3	6.6
$1.88–$2.49:														
Spring 1935	73	5.3	27	2.5	.1	1.6	1.0	35	4.8	.5	.8	2.0	1.2	9.2
Summer 1935	66	5.0	30	2.6	0	2.2	1.0	39	4.7	.2	1.9	1.8	.9	9.5
Fall 1935	59	3.7	26	4.0	0	2.3	.6	37	4.4	.3	1.3	2.1	1.0	9.0
Winter 1935–36	42	4.6	28	2.3	0	1.2	.7	34	4.8	.1	1.0	1.5	.7	8.2
$2.50–$3.12:														
Winter 1934–35	36	4.8	31	2.4	0	1.7	1.7	39	6.6	.4	.8	2.7	1.6	12.0
Spring 1935	74	6.8	30	3.7	0	2.3	1.5	42	6.0	.2	2.3	2.7	1.0	12.3
Summer 1935	58	5.0	34	5.3	0	2.2	1.7	47	5.3	.4	1.5	1.6	1.2	9.9
Fall 1935	49	4.8	33	3.9	0	2.1	.7	43	5.5	.1	1.7	1.8	1.5	10.7
Winter 1935–36	36	6.4	39	2.9	0	2.2	1.3	49	6.3	.4	1.7	2.7	1.2	12.2
$3.13–$3.74:														
Spring 1935	48	8.6	31	3.9	0	2.8	1.6	45	6.8	.2	2.5	2.4	1.4	13.4
Summer 1935	32	6.9	33	3.1	0	1.7	3.9	42	5.9	.1	2.9	1.3	1.9	12.0
Fall 1935	27	6.0	33	4.2	0	2.1	2.7	44	6.6	.4	1.5	1.4	1.5	11.4
Winter 1935–36	40	6.4	39	4.1	0	2.0	1.9	50	6.4	.1	2.0	1.6	1.0	11.0
$3.75–$4.37:														
Winter 1934–35	14	9.1	35	3.6	0	4.7	1.0	54	8.4	0	1.2	1.8	2.4	13.7
Spring 1935	16	9.7	46	2.8	0	2.1	2.8	57	8.3	.2	1.7	3.2	1.1	14.6
Summer 1935	22	8.1	42	1.7	0	2.9	5.4	54	7.7	0	2.8	1.1	1.8	13.4
Winter 1935–36	17	8.6	32	1.6	0	2.1	4.0	42	7.0	.4	1.6	.8	1.7	11.5
$4.38 and over:														
Spring 1935	9	11.0	47	2.1	0	2.0	2.6	55	10.9	0	5.3	3.0	1.2	20.5
Winter 1935–36	8	10.0	44	4.9	0	1.8	2.0	55	5.6	0	7.9	1.2	1.3	16.0
East North Central:														
$1.25–$1.87:														
Spring 1935	10	6.2	24	2.4	0	1.0	.5	30	2.4	4.2	.1	2.2	1.8	10.6
Summer 1935	9	6.3	27	1.8	0	1.7	0	34	4.0	2.1	.2	2.5	1.2	10.0
Spring 1936	24	5.6	23	2.9	0	1.7	.2	31	2.6	2.0	.1	3.3	1.3	9.3
Summer 1936	13	4.0	17	3.7	0	1.3	0	25	4.2	.2	.4	2.0	.5	7.2
Fall 1936	14	2.3	20	.9	0	1.8	1.1	27	2.5	2.2	.4	2.6	3.6	11.3

$1.88–$2.49:														
Spring 1935	26	6.3	27	2.6	0	1.9	1.0	36	3.9	2.9	.9	3.5	1.3	12.5
Summer 1935	16	8.1	29	1.9	0	2.5	.7	39	4.7	.8	2.1	2.2	2.1	11.9
Spring 1936	32	4.9	24	3.6	0	1.7	1.2	33	3.9	1.6	1.0	3.3	1.6	11.3
Summer 1936	16	5.7	27	5.4	0	1.6	.4	37	3.9	.2	.3	3.9	.9	9.2
Fall 1936	17	4.3	26	1.6	0	2.4	1.0	35	2.9	1.6	1.0	3.5	2.8	11.8
Winter 1936–37	12	6.0	25	2.4	0	1.3	.8	32	2.3	1.8	1.6	3.1	3.6	12.4
$2.50–$3.12:														
Spring 1935	17	4.3	35	3.3	0	2.6	.3	47	5.4	1.0	1.5	4.0	1.3	13.2
Summer 1935	14	5.7	26	5.0	0	1.5	2.6	35	7.5	.8	.9	4.6	1.1	14.9
Spring 1936	45	7.3	29	3.3	0	3.0	3.4	43	5.0	1.0	1.7	4.2	2.7	14.7
Summer 1936	18	6.3	26	3.0	0	2.1	1.6	36	5.6	.5	1.2	3.3	1.9	12.4
Fall 1936	20	6.4	35	4.0	0	3.1	.8	49	3.9	1.7	1.2	5.5	3.2	15.5
Winter 1936–37	15	6.8	35	4.6	0	3.6	2.6	51	2.6	1.9	1.2	3.4	3.0	12.1
$3.13–$3.74:														
Spring 1935	13	7.7	41	3.8	0	4.0	2.2	57	7.2	1.2	1.5	4.6	3.3	17.7
Spring 1936	23	6.2	35	4.0	0	2.9	2.5	49	6.5	1.5	1.8	3.3	2.0	15.0
Summer 1936	9	9.4	28	4.2	0	2.2	1.0	39	6.8	1.0	1.0	2.7	3.8	15.4
Fall 1936	8	7.6	43	1.2	0	2.2	2.4	53	4.2	2.1	.8	4.9	3.2	15.2
$3.75–$4.37:														
Summer 1936	10	10.9	24	5.4	0	2.8	2.9	38	10.0	0	.8	6.9	3.0	20.6
West North Central:														
$1.25–$1.87:														
Spring 1936	16	5.1	20	3.2	0	1.4	.9	28	3.8	.6	.9	2.4	.8	8.6
$1.88–$2.49:														
Spring 1936	17	8.9	35	4.8	0	1.7	1.5	45	5.3	0	.9	1.9	1.6	10.0
Summer 1936	10	7.8	35	.7	0	1.7	1.1	41	4.0	.1	.4	2.6	1.7	8.9
$2.50–$3.12:														
Spring 1936	26	7.9	34	1.0	0	2.1	3.6	40	5.2	1.2	1.6	2.7	1.2	12.4
Summer 1936	11	11.2	29	2.8	0	1.6	1.6	37	6.3	0	1.0	4.6	3.4	15.6
$3.13–$3.74:														
Spring 1936	23	10.4	32	2.0	0	2.0	3.4	42	7.1	.2	2.0	2.8	1.5	13.6
Summer 1936	9	10.1	42	.6	0	2.8	3.9	53	6.2	0	2.6	4.4	2.4	16.3
South Atlantic:														
$1.25–$1.87:														
Fall 1935	9	3.7	14	10.1	0	.7	0	26	1.3	2.0	.7	4.8	3.1	11.9
Spring 1936	11	4.4	9	8.8	0	1.0	0	20	.7	2.0	.6	3.7	3.6	10.6
$1.88–$2.49:														
Fall 1935	15	5.2	17	5.4	0	1.6	0	27	2.4	1.4	.9	5.1	3.8	13.6
Spring 1936	19	12.8	20	6.3	0	1.6	1.7	32	3.0	1.8	1.1	5.6	4.6	16.1
$2.50–$3.12:														
Fall 1935	18	5.5	20	7.8	0	2.1	.8	34	2.8	1.2	1.4	4.8	3.3	13.5
Spring 1936	16	7.3	20	6.0	0	2.0	.2	32	3.6	1.7	3.8	4.9	8.0	22.1
$3.13–$3.74:														
Spring 1936	10	6.7	31	5.6	0	1.9	.4	25	3.6	.8	2.4	5.8	4.8	17.3

See footnotes at end of table.

TABLE 61.—*Eggs, milk, and fats: Estimated per-capita consumption in 3 months by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Records	Eggs	Milk, whole, skim, buttermilk	Milk, evaporated, condensed	Milk, dried, skim, or whole	Cheese	Cream, ice cream	Total fluid milk equivalent	Butter	Other table fats	Cooking or salad oils, dressings	Lard, other cooking fats	Bacon, salt pork, suet	Total fats
White—Continued.														
East South Central:	*Number*	*Dozen*	*Quarts*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Quarts*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
$0.63–$1.24:														
Spring 1935	7	4.8	12	5.1	0	0.2	0	17	1.6	1.3	0.5	7.0	3.2	13.6
Summer 1935	10	3.0	6	5.5	0	.1	0	11	.7	1.6	.8	6.8	3.3	13.2
$1.25–$1.87:														
Spring 1935	35	5.3	20	7.4	.2	.9	0	31	2.0	2.1	1.8	5.1	3.2	14.2
Summer 1935	29	4.1	15	4.9	.3	1.0	.6	25	.9	1.8	1.3	6.2	4.3	14.6
Fall 1935	26	3.8	17	5.8	.2	.9	.1	26	2.3	1.1	1.5	6.0	2.8	13.7
Winter 1935–36	24	4.7	22	5.4	.1	1.3	0	31	1.8	2.0	.9	6.2	3.1	14.0
$1.88–$2.49:														
Spring 1935	21	8.1	22	5.8	0	1.0	.8	33	1.6	2.4	1.0	10.3	3.5	18.6
Summer 1935	36	6.3	32	5.2	0	1.5	.3	42	2.6	1.3	2.4	5.9	3.6	15.7
Fall 1935	25	5.6	24	4.8	.1	1.2	.3	33	2.6	2.3	1.5	6.4	5.1	17.9
Winter 1935–36	15	6.2	28	2.4	.3	1.6	.2	36	2.3	1.7	1.2	6.0	4.7	16.0
$2.50–$3.12:														
Spring 1935	10	7.0	36	5.4	0	1.4	1.2	46	3.3	1.3	3.5	7.1	5.2	20.4
Summer 1935	12	8.1	60	3.2	.7	1.2	.6	70	3.5	1.6	1.6	6.5	6.1	19.4
Fall 1935	17	8.9	52	4.4	.3	1.8	.2	63	3.2	1.3	1.3	6.5	4.0	16.3
Winter 1935–36	15	6.6	34	4.6	.4	1.9	.1	47	2.7	1.5	2.9	7.0	3.6	17.7
West South Central:														
$1.25–$1.87:														
Spring 1935	11	5.4	25	4.0	0	1.4	.1	33	1.0	2.4	1.5	4.0	1.8	10.8
$1.88–$2.49:														
Spring 1935	20	7.7	29	3.5	0	1.6	.9	38	2.0	1.8	1.7	4.8	3.4	13.8
$2.50–$3.12:														
Spring 1935	8	5.9	26	3.4	0	1.8	2.1	36	2.4	2.0	1.8	8.0	7.0	21.6
Mountain:														
$1.25–$1.87:														
Summer 1935	10	3.4	26	6.1	0	3.2	0	41	4.8	.2	1.0	2.1	.9	9.1
$1.88–$2.49:														
Spring 1935	9	7.7	42	4.3	0	.4	.8	48	5.2	0	.8	1.8	.9	8.7
Summer 1935	23	5.5	26	7.3	0	2.0	1.6	39	5.2	0	2.6	2.0	1.0	11.0
$2.50–$3.12:														
Spring 1935	11	8.8	38	6.8	0	2.4	1.1	52	5.8	.3	3.8	2.5	.4	12.9
Summer 1935	14	6.2	33	8.4	0	1.8	1.2	47	7.2	.2	2.0	1.5	2.3	13.4
$3.13–$3.74:														
Summer 1935	9	8.7	35	7.6	0	4.2	2.3	56	8.7	0	4.4	1.8	1.8	16.7

Pacific:														
$1.25-$1.87:														
Summer 1935	12	2.6	22	4.9	0	1.6	4.3	33	2.9	1.4	2.5	1.7	1.1	9.6
Winter 1935-36	9	3.8	22	4.9	0	.8	1.4	30	1.7	3.3	1.4	2.0	2.0	10.3
$1.88-$2.49:														
Spring 1935	16	6.3	25	7.2	0	.9	.8	35	3.8	2.9	2.1	1.9	.5	11.2
Summer 1935	53	5.4	31	5.6	0	2.3	2.6	44	4.4	1.3	1.9	1.7	.9	10.2
Fall 1935	34	5.8	34	5.7	0	2.2	1.5	46	5.7	.6	1.0	2.5	1.1	11.1
Winter 1935-36	34	5.8	31	5.5	0	2.2	.8	43	3.4	1.5	2.4	2.0	1.5	10.7
$2.50-$3.12:														
Spring 1935	29	7.2	33	6.0	0	3.4	2.1	48	6.2	1.6	2.2	3.3	2.1	15.5
Summer 1935	50	6.1	29	5.9	0	2.7	2.8	44	5.7	1.1	2.9	2.3	1.6	13.6
Fall 1935	23	7.2	32	5.4	0	2.4	1.5	46	7.0	.1	3.0	2.2	1.8	14.0
Winter 1935-36	30	7.1	29	4.2	0	2.3	1.5	41	4.4	1.8	3.0	2.5	1.4	13.2
$3.13-$3.74:														
Spring 1935	12	8.6	33	8.6	0	4.3	2.0	55	7.4	.4	2.7	1.9	2.9	15.3
Summer 1935	30	7.5	33	5.9	0	3.1	4.3	50	6.3	1.7	3.7	2.2	2.5	16.5
Fall 1935	23	7.7	41	5.4	0	3.4	6.5	59	7.0	.4	2.6	4.0	1.8	15.7
Winter 1935-36	11	6.2	42	3.5	0	2.5	3.9	54	6.9	1.2	2.1	2.1	2.6	15.0
$3.75-$4.37:														
Spring 1935	8	10.0	34	5.9	0	3.0	5.7	52	8.4	.5	3.4	2.0	2.2	16.5
Summer 1935	14	8.7	35	6.6	0	4.9	4.1	58	7.6	0	4.1	1.9	3.0	16.5
Winter 1935-36	15	8.0	27	7.9	0	3.6	2.8	46	6.1	3.3	7.4	4.9	3.3	24.8
$4.38 and over:														
Spring 1935	9	13.3	33	11.4	0	7.4	14.5	73	7.5	.3	5.6	3.9	3.5	20.8
Summer 1935	16	12.3	45	9.8	0	5.3	6.5	72	8.8	.2	9.6	2.9	4.6	26.2
Winter 1935-36	13	9.3	26	3.6	0	5.8	5.3	49	10.4	.5	5.5	3.8	2.8	23.1
Negro:														
South:														
$0.63-$1.24:														
Spring 1935	22	2.3	5	1.6	0	.6	.3	8	1.2	.6	.1	6.6	4.6	13.1
Summer 1935	27	2.6	3	2.1	.3	.2	.1	7	1.0	.5	.2	6.6	4.0	12.3
Fall 1935	35	1.2	4	1.9	.2	.4	0	8	1.0	.9	.3	6.5	3.3	12.0
$1.25-$1.87:														
Spring 1935	23	3.4	9	2.4	.1	.5	.2	13	1.7	.6	.3	9.7	9.6	21.8
Summer 1935	35	2.7	9	4.2	.1	.3	.2	15	2.1	.7	.7	9.5	9.3	22.4
Fall 1935	23	2.2	9	3.4	.3	.6	0	15	2.4	.4	1.7	7.9	5.8	18.1
$1.88-$2.49:														
Spring 1935	13	4.9	11	3.5	.4	1.5	.7	20	1.8	1.0	.5	11.8	5.0	20.0
Summer 1935	8	2.2	9	2.0	.4	1.5	1.0	17	2.7	0	.4	13.1	12.6	28.9
Fall 1935	16	3.2	18	3.3	.2	.8	0	24	2.3	.4	.8	13.0	11.3	27.7
$2.50-$3.12:														
Summer 1935	8	6.2	22	4.9	0	1.2	1.8	31	4.5	0	.6	13.5	12.9	31.4
Fall 1935	10	4.6	25	6.1	.3	1.5	1.5	37	4.2	.6	.2	13.4	10.5	28.9

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[1] See footnote 1, table 3.

[2] See footnote 2, table 10.

TABLE 62.—*Lean meat and grain products: Estimated per-capita consumption in 3 months, by color of family, region, level of food expenditure, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food,[1] and season	Beef, veal	Mutton, lamb	Pork [2]	Miscellaneous meat products	Poultry	Fish, other sea food	Total meat, poultry, fish	Bread, rolls	Other baked goods	Flours, meals	Ready-to-eat cereals	Other cereal products	Total flour equivalent [3]
White:													
North Atlantic:													
$1.25–$1.87:	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Winter 1934–35	12.3	0.3	5.6	3.4	0.0	2.0	23.7	20.8	5.8	11.2	0.8	5.3	35.1
Spring 1935	8.8	1.4	5.1	1.6	.7	2.6	20.0	28.6	3.9	4.8	.8	4.8	32.1
Summer 1935	8.9	1.4	3.8	1.8	.9	3.5	20.3	34.6	2.7	5.3	1.1	5.0	36.6
Fall 1935	11.0	2.1	2.5	2.5	2.7	5.1	26.1	27.9	5.6	8.1	1.5	8.3	40.4
Winter 1935–36	11.0	1.7	.5	1.7	.2	1.9	17.0	28.6	1.8	5.1	.4	10.5	36.3
$1.88–$2.49:													
Spring 1935	11.0	1.1	5.6	2.5	1.9	5.2	27.3	26.7	7.0	6.9	1.7	4.3	35.4
Summer 1935	11.6	1.6	5.1	1.5	2.0	3.6	25.4	31.8	6.2	4.4	2.0	5.0	36.7
Fall 1935	12.7	1.6	5.1	2.9	3.6	4.6	30.5	30.8	6.9	8.1	1.3	6.8	41.5
Winter 1935–36	13.1	1.2	5.5	3.6	3.5	4.5	31.2	32.1	6.1	9.9	.7	4.9	41.2
$2.50–$3.12:													
Winter 1934–35	15.9	1.0	8.2	5.3	3.3	4.2	38.0	26.5	11.2	9.8	1.0	5.6	41.5
Spring 1935	16.7	2.7	7.6	2.2	2.2	5.8	37.2	30.8	8.0	9.6	2.2	5.3	43.0
Summer 1935	14.4	3.4	4.6	2.1	5.0	5.6	35.1	30.4	8.7	5.4	2.2	4.1	38.0
Fall 1935	15.6	3.4	7.2	2.6	4.4	5.6	38.8	31.9	7.3	8.9	1.0	6.2	42.4
Winter 1935–36	18.8	3.7	12.9	4.4	6.2	6.8	52.9	42.5	11.0	6.3	.8	7.6	50.4
$3.13–$3.74:													
Spring 1935	16.2	2.8	8.1	3.4	4.8	6.4	41.9	33.4	14.1	7.1	1.8	7.3	48.0
Summer 1935	14.8	7.0	7.7	1.2	3.7	7.0	41.4	32.2	13.7	5.0	1.8	5.2	42.8
Fall 1935	15.0	3.9	11.4	2.8	6.1	7.8	47.0	38.4	10.7	8.9	1.4	6.1	49.3
Winter 1935–36	15.4	5.2	5.8	3.3	11.3	6.8	47.6	34.6	8.4	5.2	.8	4.8	39.6
$3.75–$4.37:													
Winter 1934–35	16.4	7.1	19.3	4.7	3.0	6.3	56.9	35.0	10.0	8.7	.7	6.0	45.3
Spring 1935	18.2	5.7	12.8	2.0	5.8	8.5	53.1	37.9	10.9	10.7	2.8	6.4	52.7
Summer 1935	22.4	5.5	9.2	4.2	7.8	7.3	56.3	33.5	11.5	8.4	2.8	5.1	46.4
Winter 1935–36	15.2	8.7	9.0	3.6	11.4	7.9	55.7	39.7	12.8	6.2	1.5	7.5	50.4
$4.38 and over:													
Spring 1935	24.4	12.9	13.0	3.8	5.2	7.4	66.8	32.8	11.0	16.2	2.6	9.3	57.5
Winter 1935–36	18.8	1.0	11.2	2.8	16.4	6.2	56.4	29.5	10.8	7.4	1.4	7.6	43.4
East North Central:													
$1.25–$1.87:													
Spring 1935	9.8	0	4.8	2.5	0	2.1	19.2	29.1	6.8	8.6	1.6	3.8	38.1
Summer 1935	7.3	.9	3.2	2.2	0	2.5	16.2	21.9	6.0	12.4	2.2	3.2	36.5
Spring 1936	8.8	0	3.1	6.7	0	.9	19.5	21.9	4.0	12.7	1.8	3.1	34.9
Summer 1936	7.4	0	5.2	7.0	3.2	1.5	24.4	25.1	7.6	8.7	1.4	3.6	35.6
Fall 1936	7.5	0	2.2	8.4	1.7	.9	20.1	26.0	7.7	11.6	1.4	3.4	39.0

$1.88–$2.49:												
Spring 1935	13.9	.4	7.5	4.4	.3	1.9	28.4	23.7	9.2	10.7	1.0	4.3	38.0
Summer 1935	13.5	1.1	2.1	4.4	1.0	1.5	23.6	26.9	7.8	10.6	1.7	2.8	38.4
Spring 1936	11.1	.2	4.8	7.1	.3	1.2	24.7	25.4	7.0	14.9	2.4	3.6	42.6
Summer 1936	11.0	.5	5.5	8.9	1.7	2.1	29.8	23.0	8.0	17.4	1.2	5.7	45.6
Fall 1936	8.8	0	5.3	10.0	1.6	2.0	27.7	31.0	8.9	8.1	1.2	3.2	39.2
Winter 1936–37	8.6	0	8.7	12.4	1.6	1.7	33.0	27.4	10.5	8.4	2.1	5.0	41.6
$2.50–$3.12:													
Spring 1935	18.9	1.6	5.3	6.1	1.0	3.0	36.0	29.6	11.7	13.3	1.0	6.2	48.2
Summer 1935	16.5	.1	5.3	4.0	1.6	2.3	30.1	31.1	9.6	14.9	1.6	6.4	50.2
Spring 1936	15.1	.1	8.1	7.8	1.4	2.4	34.8	31.6	9.4	13.3	1.5	5.0	47.3
Summer 1936	13.7	.4	10.2	6.7	3.4	2.2	36.6	30.3	13.1	10.5	1.6	3.2	44.4
Fall 1936	8.4	0	6.2	12.4	4.8	3.9	35.7	31.1	10.8	7.7	2.1	2.9	40.8
Winter 1936–37	12.7	0	9.8	11.6	4.9	2.8	41.7	35.0	11.9	8.0	1.4	3.6	44.4
$3.13–$3.74:													
Spring 1935	19.7	.4	6.4	10.3	0	1.6	38.4	23.5	10.1	20.1	2.2	7.0	51.8
Spring 1936	19.1	0	10.6	12.9	.7	1.5	44.8	31.1	12.1	16.2	2.1	6.6	53.8
Summer 1936	20.7	0	14.0	7.2	3.0	2.6	47.5	40.0	17.0	10.1	2.1	2.5	53.2
Fall 1936	8.9	0	11.1	12.2	10.8	3.2	46.2	32.1	10.6	12.2	2.6	5.8	49.3
$3.75–$4.37:													
Summer 1936	21.5	0	16.2	15.2	6.1	8.6	67.6	41.9	14.0	11.0	1.3	3.7	53.4
West North Central:													
$1.25–$1.87:													
Spring 1936	9.2	0	4.2	9.4	.7	1.9	25.5	27.7	5.9	6.3	.8	3.2	32.8
$1.88–$2.49:													
Spring 1936	10.2	.1	4.2	6.4	1.6	3.2	25.8	25.6	4.8	9.1	1.6	3.0	34.0
Summer 1936	12.9	0	4.1	6.7	.9	1.8	26.4	30.7	9.2	10.6	1.2	4.9	43.8
$2.50–$3.12:													
Spring 1936	14.9	1.2	8.9	7.3	1.9	2.5	36.8	31.1	12.1	7.2	1.6	3.5	41.2
Summer 1936	15.7	0	7.6	9.8	2.2	2.6	38.0	38.8	6.7	10.8	1.7	3.2	46.2
$3.13–$3.74:													
Spring 1936	15.6	.6	10.4	7.4	2.1	5.2	41.3	30.8	13.7	9.0	2.2	3.1	44.2
Summer 1936	13.4	0	15.4	3.5	4.9	1.0	38.3	34.1	12.3	7.5	4.5	4.2	47.3
South Atlantic:													
$1.25–$1.87:													
Fall 1935	11.4	0	4.3	3.0	4.9	2.3	25.9	12.7	1.3	12.6	1.1	11.0	39.0
Spring 1936	6.8	0	4.8	2.9	3.2	1.8	19.5	20.0	2.0	13.4	1.5	3.2	32.8
$1.88–$2.49:													
Fall 1935	13.0	.2	7.7	4.5	2.4	4.4	32.3	21.7	5.9	15.4	1.2	5.8	40.9
Spring 1936	11.4	.7	7.5	3.6	2.1	12.0	37.5	20.5	4.4	27.3	2.0	2.8	48.8
$2.50–$3.12:													
Fall 1935	14.6	0	7.2	3.3	6.8	5.0	36.9	28.3	13.6	13.8	2.1	7.2	44.4
Spring 1936	16.8	0	7.8	7.4	4.7	4.9	41.6	23.0	4.3	20.2	.8	5.0	44.3
$3.13–$3.74:													
Spring 1936	11.2	.4	15.3	5.4	7.3	9.2	48.9	23.6	8.3	13.6	2.9	1.2	39.0

See footnotes at end of table.

TABLE 62.—*Lean meat and grain products: Estimated per-capita consumption in 3 months, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Beef, veal	Mutton, lamb	Pork	Miscellaneous meat products	Poultry	Fish, other sea food	Total meat, poultry, fish	Bread, rolls	Other baked goods	Flours, meals	Ready-to-eat cereals	Other cereal products	Total flour equivalent
White—Continued.													
East South Central:													
$0.63–$1.24:	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Spring 1935	7.5	0	1.7	2.3	0	2.4	14.0	8.2	1.7	36.2	0.6	5.1	48.6
Summer 1935	4.7	0	1.2	1.2	0	4.2	11.2	8.7	.7	24.7	.4	6.8	38.1
$1.25–$1.87:													
Spring 1935	6.8	.4	3.1	1.4	1.7	2.1	15.6	17.0	2.8	22.9	1.0	5.0	42.2
Summer 1935	6.6	0	1.7	2.8	2.2	3.5	16.9	15.9	2.5	26.0	1.0	3.9	43.1
Fall 1935	8.6	.2	2.6	2.8	.7	2.0	16.9	13.7	2.0	30.8	1.1	2.5	44.9
Winter 1935–36	8.3	0	5.3	2.4	.8	1.6	18.4	11.3	1.1	29.6	.7	2.8	41.5
$1.88–$2.49:													
Spring 1935	12.2	0	3.9	3.0	1.2	2.0	22.3	18.3	5.0	29.0	.9	5.2	50.6
Summer 1935	9.0	.8	3.2	1.8	2.5	3.0	20.3	19.6	3.5	19.0	1.9	3.3	39.8
Fall 1935	10.9	0	4.2	2.5	4.3	3.3	25.1	17.1	5.7	23.5	1.0	4.0	43.7
Winter 1935–36	9.4	0	7.1	3.1	6.0	2.5	28.2	14.1	1.8	30.9	.5	3.9	45.9
$2.50–$3.12:													
Spring 1935	6.8	1.5	9.0	1.5	4.5	3.3	26.6	17.7	7.1	23.7	1.7	3.0	45.0
Summer 1935	11.2	1.5	1.4	1.5	4.5	5.3	25.4	18.0	4.5	22.9	1.6	4.2	43.8
Fall 1935	12.8	0	6.2	1.8	4.5	4.7	30.0	20.0	4.4	22.0	2.2	3.4	44.0
Winter 1935–36	12.7	0	10.8	4.0	5.0	3.4	36.0	18.5	7.2	27.8	.9	5.8	51.6
West South Central:													
$1.25–$1.87:													
Spring 1936	7.6	0	2.2	3.9	0	.5	14.1	25.5	2.0	14.8	.9	3.6	37.8
$1.88–$2.49:													
Spring 1936	10.6	.9	3.8	7.1	.7	1.4	24.5	28.9	4.9	9.5	2.6	3.6	38.4
$2.50–$3.12:													
Spring 1936	20.0	0	10.9	4.0	.7	2.2	37.7	29.2	5.4	17.2	1.2	2.3	44.0
Mountain:													
$1.25–$1.87:													
Summer 1935	7.0	.4	.6	4.5	0	2.3	14.8	15.9	2.4	11.4	3.1	4.0	30.6
$1.88–$2.49:													
Spring 1935	11.9	3.6	5.0	2.3	0	.8	23.5	20.2	2.5	8.6	1.1	4.3	29.2
Summer 1935	11.0	2.2	.8	5.0	.7	2.6	22.3	21.0	4.0	12.0	1.8	4.0	34.6
$2.50–$3.12:													
Spring 1935	13.4	4.5	7.6	1.6	3.4	8.7	39.4	25.5	3.6	8.4	1.3	6.6	35.8
Summer 1935	12.0	5.4	1.6	3.6	4.0	2.7	29.2	25.4	5.2	6.9	1.5	3.2	32.1
$3.13–$3.74:													
Summer 1935	16.6	4.5	2.1	3.9	8.3	3.8	39.2	32.8	5.5	11.4	1.7	4.1	42.9

Pacific:												
$1.25–$1.87:												
Summer 1935	10.0	2.0	1.2	2.6	1.8	3.0	20.8	22.4	4.1	5.6	1.4	4.8	29.5
Winter 1935–36	14.1	1.2	2.4	1.6	.2	2.1	21.6	23.9	5.1	6.8	1.4	4.7	32.3
$1.88–$2.49:													
Spring 1935	11.9	2.1	3.5	2.3	2.1	6.5	28.2	25.1	4.8	14.1	1.8	4.5	40.4
Summer 1935	9.5	2.9	1.3	2.3	1.4	3.0	20.5	25.4	4.8	8.2	1.5	4.4	34.3
Fall 1935	13.5	2.1	1.2	2.2	.7	2.9	22.7	24.6	4.1	13.5	1.7	5.2	39.6
Winter 1935–36	13.7	3.1	3.4	3.2	2.5	3.5	29.2	24.3	5.8	6.2	1.2	4.4	32.1
$2.50–$3.12:													
Spring 1935	15.2	3.0	2.9	1.5	2.3	3.4	28.2	22.9	7.4	12.9	2.1	6.1	41.4
Summer 1935	14.1	3.9	3.0	3.8	3.5	4.9	33.3	25.0	5.9	8.7	2.4	3.4	35.2
Fall 1935	17.1	6.1	1.7	2.2	3.7	6.3	37.1	26.9	7.2	13.6	1.8	6.9	45.1
Winter 1935–36	16.5	5.2	4.9	3.7	1.4	5.2	36.7	27.0	7.6	10.4	.9	7.8	42.2
$3.13–$3.74:													
Spring 1935	14.1	8.0	3.3	2.7	.9	5.5	34.5	33.5	8.9	10.7	1.8	7.4	48.3
Summer 1935	14.9	6.1	2.6	3.8	3.2	8.9	39.4	30.5	8.9	11.0	2.1	5.3	44.8
Fall 1935	14.9	3.0	1.4	1.7	8.8	8.5	38.2	22.7	3.6	19.3	1.3	5.2	43.4
Winter 1935–36	21.0	4.6	6.3	2.3	.6	2.9	37.9	29.8	14.1	11.0	1.0	7.4	48.8
$3.75–$4.37:													
Spring 1935	18.4	6.9	5.4	1.6	3.2	6.6	42.0	34.1	15.7	5.4	3.0	5.5	47.2
Summer 1935	20.6	6.4	3.9	6.7	5.1	5.7	48.3	27.7	8.1	13.4	2.0	5.2	44.6
Winter 1935–36	22.0	7.9	8.6	2.7	12.4	3.3	56.7	30.5	15.3	7.0	1.3	5.0	44.1
$4.38 and over:													
Spring 1935	21.0	6.6	8.0	3.6	12.2	8.9	60.2	27.5	25.4	14.6	.8	13.8	64.7
Summer 1935	19.2	9.8	6.6	5.6	2.4	8.6	52.2	36.2	8.0	11.2	.7	7.6	49.1
Winter 1935–36	32.6	14.7	8.0	4.7	8.5	6.6	75.2	43.1	16.0	12.1	1.5	3.4	56.6
Negro:													
South:													
$0.63–$1.24:													
Spring 1935	9.9	.2	3.4	2.0	1.2	7.3	24.0	6.5	.4	26.3	0	5.6	36.5
Summer 1935	6.4	0	3.1	2.1	3.4	3.8	18.8	4.8	.5	34.2	.1	4.7	42.4
Fall 1935	5.4	.2	3.7	3.2	2.0	8.0	22.3	5.5	.6	30.6	0	7.3	41.9
$1.25–$1.87:													
Spring 1935	5.4	0	7.6	3.2	3.7	8.0	28.0	6.3	.5	43.2	0	8.2	56.0
Summer 1935	9.5	.1	8.3	1.7	2.4	8.2	30.1	4.9	.3	41.9	.2	5.7	51.2
Fall 1935	14.4	.9	6.2	5.0	2.5	5.7	34.6	9.5	.6	30.1	0	12.3	49.3
$1.88–$2.49:													
Spring 1935	9.6	0	16.8	4.6	7.0	19.3	57.1	10.6	3.3	39.2	.4	12.5	61.2
Summer 1935	16.9	0	7.8	6.8	2.9	12.0	46.3	9.9	3.3	59.3	.6	7.2	76.0
Fall 1935	6.4	0	11.4	6.4	6.7	8.2	39.3	.8	1.3	58.2	0	9.1	68.7
$2.50–$3.12:													
Summer 1935	14.4	.7	14.6	1.4	11.9	10.1	53.0	9.0	2.3	48.7	.8	10.5	67.6
Fall 1935	17.8	.7	12.9	8.7	8.8	7.0	56.0	22.2	3.2	54.3	.4	8.4	80.0

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[1] See footnote 1, table 3.

[2] Exclusive of bacon and salt pork.

[3] See footnote 2, table 13.

Table 63.—*Sugars, vegetables, and fruits: Estimated per-capita consumption in 3 months, by color of family, region, level of food expenditure, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food,[1] and season	Sugars	Jellies, jams, sirups, candies	Potatoes, sweetpotatoes	Mature beans and peas, cooked or canned	Dried vegetables, nuts	Leafy, green, and yellow vegetables	Tomatoes	Other vegetables	Citrus fruits	Dried fruits	Other fruits
White:											
North Atlantic:											
$1.25–$1.87:	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
Winter 1934–35	12.2	1.9	35.5	0	3.7	11.2	5.4	9.9	4.4	1.2	13.6
Spring 1935	11.9	.8	40.2	0	3.8	9.0	3.3	4.9	4.8	.7	7.8
Summer 1935	11.7	1.7	33.2	0	2.8	12.9	6.1	8.0	4.4	.3	13.7
Fall 1935	9.8	1.0	32.3	1.3	2.5	11.3	3.9	8.2	3.2	.5	17.1
Winter 1935–36	12.9	1.5	19.9	0	2.6	15.9	5.9	5.3	3.7	1.7	8.2
$1.88–$2.49:											
Spring 1935	13.9	3.2	42.4	1.7	2.1	14.9	3.9	6.7	11.2	.9	20.1
Summer 1935	13.7	2.0	34.9	0	2.6	17.0	11.7	9.4	8.7	.6	28.0
Fall 1935	13.0	1.7	42.7	1.9	2.0	14.8	5.3	13.9	5.6	1.0	22.6
Winter 1935–36	11.7	1.6	30.1	1.6	1.7	13.4	4.5	9.9	8.3	1.4	15.8
$2.50–$3.12:											
Winter 1934–35	14.8	3.5	45.1	0	5.2	16.5	5.6	12.8	17.2	1.5	17.7
Spring 1935	15.1	2.1	43.8	0	4.1	20.0	6.0	10.6	12.2	1.6	19.6
Summer 1935	14.5	1.3	37.9	0	4.5	22.2	10.9	19.5	13.0	.8	34.7
Fall 1935	14.9	2.0	44.7	2.2	2.5	20.4	9.7	13.6	10.4	1.4	30.6
Winter 1935–36	14.5	1.9	41.6	2.4	2.6	22.8	9.0	11.5	13.7	2.1	22.0
$3.13–$3.74:											
Spring 1935	16.6	1.6	44.8	2.2	3.5	25.1	10.8	15.0	21.4	1.8	26.1
Summer 1935	15.2	2.2	42.2	0	2.5	27.2	9.4	24.0	15.5	1.2	40.6
Fall 1935	14.8	3.5	52.7	2.8	1.7	18.5	11.6	23.4	8.4	2.2	41.3
Winter 1935–36	16.4	1.6	38.9	1.9	2.4	21.1	6.0	17.2	21.1	1.9	29.9
$3.75–$4.37:											
Winter 1934–35	17.3	3.4	52.3	0	5.7	31.4	12.3	25.6	31.7	3.5	33.7
Spring 1935	18.3	3.0	48.2	0	2.7	34.4	6.5	15.1	29.4	3.7	35.9
Summer 1935	19.1	2.4	39.8	0	3.1	36.9	12.1	17.6	11.7	1.4	51.5
Winter 1935–36	15.6	1.9	43.3	1.4	4.1	21.2	8.2	16.9	21.8	3.9	33.9
$4.38 and over:											
Spring 1935	19.1	1.6	51.2	2.0	1.8	32.2	7.5	13.4	22.5	.3	43.6
Winter 1935–36	15.3	5.3	29.9	0	3.3	26.7	10.7	11.5	22.0	.8	53.1
East North Central:											
$1.25–$1.87:											
Spring 1935	4.8	2.9	42.4	1.2	3.7	11.2	3.6	6.0	8.0	.8	10.8
Summer 1935	12.0	2.1	41.6	1.0	.8	15.3	4.6	6.9	6.7	.8	13.4
Spring 1936	11.8	1.9	28.7	.3	2.7	10.0	2.2	6.6	6.7	.8	13.9
Summer 1936	6.8	2.2	25.4	.7	.9	9.3	3.4	7.9	1.9	.4	17.6
Fall 1936	7.5	3.0	28.9	1.0	3.1	10.4	11.5	8.8	4.9	1.0	17.8
$1.88–$2.49:											
Spring 1935	12.0	1.9	41.0	.5	1.8	15.9	4.9	7.1	9.5	1.4	24.0
Summer 1935	18.3	1.1	46.9	.9	1.5	14.8	7.2	8.6	11.6	.6	39.4
Spring 1936	11.6	2.5	34.8	1.4	3.4	12.7	3.5	14.0	13.7	.8	22.7
Summer 1936	10.4	1.9	34.4	.9	1.1	16.2	4.0	11.8	6.9	1.2	27.0
Fall 1936	13.2	2.3	30.4	2.3	5.0	13.4	7.0	19.0	6.6	.8	22.5
Winter 1936–37	10.3	2.5	29.0	3.7	4.6	12.7	3.2	9.1	7.4	.7	19.7
$2.50–$3.12:											
Spring 1935	16.4	3.2	56.1	1.1	3.8	19.2	8.9	8.8	15.3	2.5	36.3
Summer 1935	26.0	2.1	50.1	3.4	2.2	18.1	8.2	12.7	10.0	3.0	54.9
Spring 1936	14.9	2.0	41.4	2.0	3.2	23.4	5.5	15.2	17.2	.6	25.0
Summer 1936	13.1	2.8	31.6	1.9	1.4	18.1	12.3	17.6	10.7	.2	37.6
Fall 1936	14.8	5.8	38.4	1.6	3.4	19.2	8.9	18.1	11.9	1.4	36.8
Winter 1936–37	11.2	6.5	37.0	3.5	6.3	12.1	5.8	15.7	10.9	2.1	20.8
$3.13–$3.74:											
Spring 1935	21.6	3.3	33.7	.8	3.4	22.5	6.2	9.2	18.2	3.0	42.0
Spring 1936	20.1	5.3	44.5	2.5	2.3	20.6	4.6	13.2	21.1	.9	40.5
Summer 1936	19.5	5.7	45.2	1.0	2.3	14.3	9.7	13.6	14.2	1.2	39.8
Fall 1936	21.2	4.6	40.3	3.2	2.0	15.6	3.4	12.0	11.8	1.0	43.6
$3.75–$4.37:											
Summer 1936	17.4	2.5	59.5	0	1.4	34.3	13.6	28.8	13.7	3.7	24.0
West North Central:											
$1.25–$1.87:											
Spring 1936	7.1	2.8	32.8	2.4	1.4	13.5	3.0	9.3	4.0	1.0	15.8
$1.88–$2.49:											
Spring 1936	11.7	2.1	39.3	1.6	1.7	21.6	4.1	7.7	11.9	1.4	26.4
Summer 1936	15.7	2.2	24.9	2.1	2.7	12.5	7.4	6.4	3.9	.6	20.6
$2.50–$3.12:											
Spring 1936	13.5	1.8	37.4	.7	1.2	22.6	5.6	12.7	11.5	1.6	29.0
Summer 1936	13.5	2.0	37.4	1.2	.2	19.6	13.2	12.1	2.6	1.1	21.9
$3.13–$3.74:											
Spring 1936	15.6	2.5	41.2	.9	2.7	24.5	8.2	17.5	20.5	2.0	32.7
Summer 1936	12.2	2.2	47.2	2.2	3.2	22.0	16.8	18.6	22.9	2.7	33.6

[1] See footnote 1, table 3.

TABLE 63.—*Sugars, vegetables, and fruits: Estimated per-capita consumption in 3 months, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Sugars	Jellies, jams, sirups, candies	Potatoes, sweetpotatoes	Mature beans and peas, cooked or canned	Dried vegetables, nuts	Leafy, green, and yellow vegetables	Tomatoes	Other vegetables	Citrus fruits	Dried fruits	Other fruits
White—Continued.											
South Atlantic:											
$1.25–$1.87:	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
Fall 1935	15.2	3.2	32.2	0.6	2.7	11.0	6.5	6.6	9.4	1.1	19.2
Spring 1936	9.6	1.6	41.4	2.3	2.4	20.2	4.7	8.9	6.7	.4	9.8
$1.88–$2.49:											
Fall 1935	11.1	3.3	42.2	1.8	2.6	14.4	5.8	11.2	10.4	.6	32.2
Spring 1936	13.2	3.1	24.6	3.3	2.3	25.4	6.4	8.8	4.5	.9	19.6
$2.50–$3.12:											
Fall 1935	14.8	5.8	36.6	3.0	1.8	19.2	7.7	15.2	9.5	1.6	24.4
Spring 1936	14.8	2.8	28.4	.2	1.5	32.0	6.4	10.8	14.2	1.4	22.8
$3.13–$3.74:											
Spring 1936	14.4	1.9	37.0	1.6	1.7	40.8	11.2	15.6	22.6	1.6	24.2
East South Central:											
$0.63–$1.24:											
Spring 1935	7.7	4.0	17.7	0	1.9	21.4	2.9	4.6	1.0	0	14.7
Summer 1935	11.4	4.3	17.2	.8	1.5	22.1	8.6	18.8	.5	.2	11.0
$1.25–$1.87:											
Spring 1935	12.4	3.6	24.0	1.4	4.1	16.0	4.7	10.5	6.0	.9	10.9
Summer 1935	14.9	3.7	20.3	0	3.8	22.5	15.8	13.6	4.3	.5	39.2
Fall 1935	12.9	6.1	25.6	1.3	3.2	18.5	11.8	7.9	1.6	.8	13.3
Winter 1935–36	12.0	5.7	24.5	2.1	6.7	11.4	4.1	6.8	4.7	1.4	13.6
$1.88–$2.49:											
Spring 1935	15.7	3.4	29.3	.8	4.2	20.8	8.7	10.3	7.1	.9	16.3
Summer 1935	20.5	3.9	23.7	1.4	1.6	25.8	19.1	24.1	7.9	.5	45.2
Fall 1935	15.1	5.3	31.4	1.0	5.3	21.6	12.1	8.4	5.4	1.0	18.0
Winter 1935–36	12.8	6.9	27.1	1.0	6.0	18.6	5.6	5.5	13.8	1.6	21.1
$2.50–$3.12:											
Spring 1935	15.8	4.5	24.1	.8	3.1	35.3	7.6	12.1	9.1	2.0	38.0
Summer 1935	24.0	3.6	29.3	.5	4.4	27.7	16.8	18.6	12.8	.6	57.3
Fall 1935	15.5	6.4	30.0	3.3	1.8	27.4	12.6	10.6	10.4	3.8	27.8
Winter 1935–36	14.8	5.9	26.4	1.2	6.7	22.4	7.5	12.8	18.3	.5	18.8
West South Central:											
$1.25–$1.87:											
Spring 1936	12.6	4.3	13.8	.9	4.2	12.2	2.4	6.9	2.9	.6	13.0
$1.88–$2.49:											
Spring 1936	11.6	3.6	21.9	2.2	3.8	19.0	7.0	19.9	3.0	1.5	17.8
$2.50–$3.12:											
Spring 1936	26.2	3.8	36.7	1.8	.6	43.6	7.3	22.5	6.8	1.1	18.3
Mountain:											
$1.25–$1.87:											
Summer 1935	11.4	2.4	23.1	2.6	1.4	14.1	15.5	28.2	9.6	1.1	29.0
$1.88–$2.49:											
Spring 1935	12.0	2.0	37.5	.4	1.1	28.6	7.9	8.6	25.4	1.3	24.8
Summer 1935	19.7	1.6	26.6	1.5	1.2	23.4	13.2	24.6	10.0	.6	55.3
$2.50–$3.12:											
Spring 1935	17.9	2.6	28.8	0	1.2	22.7	7.7	7.2	13.6	2.0	23.3
Summer 1935	13.6	3.6	29.7	1.6	2.1	22.2	12.6	28.4	25.4	.9	62.2
$3.13–$3.74:											
Summer 1935	20.6	1.9	30.8	4.0	0	27.2	16.9	36.1	8.2	2.4	65.0
Pacific:											
$1.25–$1.87:											
Summer 1935	9.9	2.5	23.0	2.0	.4	13.4	22.9	17.4	7.3	0	33.4
Winter 1935–36	7.5	3.7	26.1	1.4	3.9	20.8	5.4	16.6	19.7	2.7	31.4
$1.88–$2.49:											
Spring 1935	12.4	1.4	29.4	.5	1.6	30.6	9.6	6.5	27.0	1.5	25.9
Summer 1935	16.2	2.3	27.0	1.6	2.1	25.4	13.6	17.1	14.9	.9	57.2
Fall 1935	15.6	2.9	30.1	.8	3.5	19.0	10.9	17.0	7.6	4.1	39.0
Winter 1935–36	9.2	2.3	30.4	1.0	1.8	25.1	4.9	13.8	19.1	1.7	31.6
$2.50–$3.12:											
Spring 1935	19.0	6.8	43.6	.6	2.9	34.6	5.7	9.5	28.1	2.0	24.2
Summer 1935	17.0	.5	28.3	1.5	1.7	30.2	16.0	21.6	25.6	1.9	65.1
Fall 1935	15.8	4.1	43.7	1.3	2.8	24.5	9.5	20.5	11.6	3.4	47.3
Winter 1935–36	10.5	4.3	35.6	1.8	5.3	26.0	8.0	20.3	27.5	2.5	26.3
$3.13–$3.74:											
Spring 1935	16.1	4.4	63.0	1.8	4.2	43.8	6.3	12.7	27.8	2.9	28.7
Summer 1935	19.3	4.4	26.8	.6	1.5	35.4	18.5	27.4	28.3	4.4	76.7
Fall 1935	24.6	3.4	59.0	.7	2.9	36.8	14.0	22.3	18.7	3.5	69.3
Winter 1935–36	14.6	9.1	23.6	3.0	1.8	30.8	7.5	25.4	26.8	3.1	43.3

TABLE 63.—*Sugars, vegetables, and fruits: Estimated per-capita consumption in 3 months, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Sugars	Jellies, jams, sirups, candies	Potatoes, sweetpotatoes	Mature beans and peas, cooked or canned	Dried vegetables, nuts	Leafy, green, and yellow vegetables	Tomatoes	Other vegetables	Citrus fruits	Dried fruits	Other fruits
White—Continued.											
Pacific—Continued.											
$3.75–$4.37:	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*
Spring 1935	12.1	5.7	31.9	0	5.3	51.0	11.2	15.8	34.9	0	54.2
Summer 1935	26.0	6.0	23.3	0	1.5	44.0	20.7	31.5	24.4	.6	84.4
Winter 1935–36	12.1	5.4	35.0	.8	3.5	39.4	6.5	32.7	30.8	3.6	34.2
$4.38 and over:											
Spring 1935	33.3	12.3	29.7	.9	2.0	57.6	11.4	28.0	54.3	5.3	49.0
Summer 1935	32.5	4.2	43.3	2.9	2.7	68.4	23.1	48.2	28.6	2.8	114.0
Winter 1935–36	15.8	3.3	41.6	3.6	2.9	59.2	9.5	35.2	30.5	3.4	49.8
Negro:											
South:											
$0.63–$1.24:											
Spring 1935	9.2	2.7	18.3	1.1	4.1	18.0	.9	2.1	.9	.3	2.8
Summer 1935	9.5	3.6	15.8	.8	2.8	17.6	3.4	9.8	.7	.3	17.3
Fall 1935	11.8	2.3	24.0	0	4.8	15.0	2.8	3.3	.6	.1	3.2
$1.25–$1.87:											
Spring 1935	11.5	3.4	29.5	.2	6.3	29.7	3.0	5.4	2.3	1.0	2.3
Summer 1935	17.0	4.6	16.4	.5	2.9	28.5	6.5	14.2	1.3	.7	34.5
Fall 1935	13.4	2.7	26.6	.3	4.8	21.7	3.3	5.5	1.5	.3	10.3
$1.88–$2.49:											
Spring 1935	17.1	3.7	32.3	0	3.3	27.6	3.4	9.2	4.7	.5	6.8
Summer 1935	19.2	4.4	19.2	0	2.4	21.9	7.3	16.7	1.2	0	42.1
Fall 1935	10.3	8.4	38.8	.4	4.8	32.6	3.6	9.7	1.5	1.6	12.3
$2.50–$3.12:											
Summer 1935	21.6	5.4	27.6	0	.2	36.3	16.5	17.7	4.3	.3	84.6
Fall 1935	23.8	2.6	36.4	1.8	4.2	50.8	3.8	12.3	.5	1.9	14.5

TABLE 64.—*Estimated average per-capita consumption of and expenditure for food in a year, by region and color of family, 1934–36*

Item	Average per-capita consumption of and expenditure for food in—							
	North Atlantic cities by 843 white families		Pacific cities by 441 white families		East South Central cities by 282 white families		Southern cities by 222 Negro families	
Bread and other baked goods:								
Bread:	*Pounds*	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*
Rye	13.3	1.14	4.7	0.47	1.4	0.13	(1)	(2)
Wheat, graham (100-percent whole grain)	3.5	.33	17.6	1.56	3.2	.33	0.1	(2)
Wheat, highly refined	64.9	5.57	52.9	4.67	44.6	4.20	14.4	1.35
Wheat, partially refined	2.5	.24	.3	.03	.5	.04	-------	-------
Other loaf breads	30.0	2.84	20.4	1.77	8.6	.82	8.4	.76
Rolls, biscuits, sandwiches	14.8	1.95	8.7	1.42	3.8	.47	3.6	.32
Other baked goods	31.2	5.53	27.5	4.87	12.7	2.18	3.1	.58
Ready-to-eat cereals:								
Corn	2.1	.35	1.6	.25	2.2	.37	.4	.07
Rice	.4	.14	.2	.06	.2	.06	(1)	(2)
Wheat	2.9	.54	4.2	.70	1.4	.31	(1)	(2)
Other (including mixed grains)	.3	.08	.5	.10	.4	.09	-------	-------
Flour and other cereals:								
Flours and meals:								
Corn meal	.8	.05	2.1	.13	30.2	.98	53.8	1.67
Prepared flour mixtures	1.4	.13	3.4	.33	.6	.06	.2	.01
Wheat flour	26.2	1.36	37.9	1.77	74.3	3.72	93.7	4.69
Other flours	.2	.01	.4	.03	(1)	(2)	-------	-------
Uncooked cereals:								
Hominy	(1)	(2)	.2	.01	3.5	.18	8.4	.37
Oat cereals	4.1	.32	5.5	.47	3.5	.31	2.2	.20
Rice, polished	3.5	.27	2.7	.22	4.2	.29	15.1	.84
Cornstarch	.4	.04	.9	.09	.1	.01	(1)	(2)

See footnotes at end of table.

TABLE 64.—*Estimated average per-capita consumption of and expenditure for food in a year, by region and color of family, 1934–36*—Continued

Item	Average per-capita consumption of and expenditure for food in—							
	North Atlantic cities by 843 white families		Pacific cities by 441 white families		East South Central cities by 282 white families		Southern cities by 222 Negro families	
	Pounds	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*
Flour and other cereals—Continued.								
Uncooked cereals—Continued.								
Wheat cereals	1.9	0.27	3.0	0.42	0.4	0.07	0.1	0.01
Other cereals	.6	.09	1.4	.23	(1)	(2)		
Macaroni, spaghetti, vermicelli	10.5	1.08	5.9	.66	3.2	.35	2.6	.28
Noodles	1.5	.24	1.5	.28	.2	.04	(1)	(2)
Eggs	32.9	7.62	40.5	7.95	33.2	6.67	15.7	2.80
Milk, cheese, ice cream:								
Cheese:								
American cheese	4.0	1.12	5.4	1.43	3.8	.87	2.1	.45
Cottage cheese	1.6	.20	3.4	.48	.2	.04		
Other cheese	2.1	.85	2.0	.79	.6	.19	.2	.04
Milk:								
Milk, condensed, evaporated	13.6	1.09	23.8	1.76	21.1	1.76	10.8	1.01
Milk, dried (whole and skim)	(1)	(2)	(1)	(2)	.8	.13	.6	.09
Milk, fluid, whole	261.4	14.40	262.9	12.13	151.8	7.98	24.8	1.36
Milk, fluid, skim, and buttermilk	1.2	.06	7.4	.21	59.0	1.70	39.5	1.15
Milk, fluid, flavored	.4	.02	1.0	.05	.9	.05	(1)	(2)
Ice cream	1.6	.51	3.9	.74	.4	.12	.8	.23
Fats:								
Butter	21.0	7.29	22.1	7.65	8.4	2.70	6.6	2.15
Cream, heavy (whipping)	1.0	.28	2.2	.67	.3	.08	.1	.03
Cream, thin (coffee)	2.6	.60	4.7	.96	.3	.08	(1)	.01
Other table fats	1.4	.24	5.2	.90	7.0	1.38	2.6	.49
Salad oils, mayonnaise, and dressings:								
Mayonnaise, salad dressings, and spreads	2.7	.66	7.5	1.76	4.6	1.01	1.3	.29
Olive oil	2.3	.61	1.4	.42	.1	.01		
Other vegetable oils	1.3	.25	1.5	.32	1.1	.25	.5	.07
Shortenings:								
Lard	5.5	.96	1.9	.30	12.4	1.90	27.5	4.40
Other	1.7	.33	5.7	.98	13.0	1.93	6.1	.88
Fat meat:								
Bacon	2.9	1.12	7.0	2.38	7.5	2.40	6.3	1.59
Salt pork, fat back	1.2	.27	.3	.08	7.5	1.64	18.8	3.88
Suet, and other	.2	.03	.3	.04	.5	.11	.2	.03
Lean meat:								
Beef:								
Beef, canned or cooked	.2	.04	.9	.21	.3	.07	(2)	(3)
Beef, corned	2.8	.64	2.4	.41	2.0	.39	.5	.11
Beef, dried	.4	.19	.3	.15	.1	.04	(1)	(2)
Steak, porterhouse	.5	.21	1.7	.52	1.7	.52	1.4	.32
Steak, sirloin	1.6	.65	3.4	.96	.9	.26	.9	.17
Steak, round	17.2	4.42	17.3	3.62	10.3	2.16	6.8	1.36
Steak, other	2.1	.74	.3	.09	.4	.11	.7	.12
Roast, rib	1.9	.53	3.3	.71	1.8	.34	1.2	.24
Roast, chuck	6.6	1.75	3.8	.68	4.7	.86	2.4	.40
Roast, round	2.1	.62	6.0	1.27	1.4	.29	.6	.11
Stew	5.7	1.25	5.1	.77	4.6	.58	9.3	1.15
Other	5.1	1.30	8.1	1.27	4.7	.74	3.5	.49
Veal:								
Steak (cutlets)	1.5	.51	1.1	.27	.7	.18	1.0	.23
Chops	1.6	.49	1.4	.36	.9	.17	3.3	.55
Roast	2.5	.58	1.8	.38	.9	.21	1.2	.23
Stew	1.5	.34	.3	.05	.1	.01	.8	.12
Other	.7	.13	1.2	.28	.2	.03	.4	.09
Mutton and lamb:								
Chops	3.3	1.05	4.8	1.23		.05	.4	.09
Stew	1.3	.25	2.6	.40	.2	.03	.2	.03
Other	6.7	1.59	8.4	1.90	.5	.10	.2	.03
Pork:								
Pork, canned or cooked (fresh and smoked)	2.8	1.08	1.2	.49	1.1	.47	.3	.11
Chops	6.1	1.86	1.9	.57	2.7	.77	3.4	.88
Steaks	.3	.09	.3	.06	.2	.07	.2	.05
Roasts	4.7	1.20	1.6	.39	2.2	.47	4.0	.80
Other fresh	1.0	.24	1.7	.44	2.0	.44	8.4	1.00
Pork, pickled	.2	.03	.2	.03	(1)	(2)	.1	.01
Whole ham, shoulder	4.7	1.23	1.4	.37	2.5	.75	1.5	.49
Picnic	1.2	.29			.2	.04	.5	.09
Sliced ham	.4	.17	.5	.21	.4	.13	1.5	.43
Other cured	1.4	.44	1.0	.27	.6	.19	1.9	.35

See footnotes at end of table.

TABLE 64.—*Estimated average per-capita consumption of and expenditure for food in a year, by region and color of family, 1934–36*—Continued

Item	Average per-capita consumption of and expenditure for food in—							
	North Atlantic cities by 843 white families		Pacific cities by 441 white families		East South Central cities by 282 white families		Southern cities by 222 Negro families	
	Pounds	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*
Lean meat—Continued.								
Miscellaneous meats, meat products:								
Deviled meats, sandwich fillings	0.6	0.16	1.1	0.26	1.1	0.23	0.4	0.07
Liver	2.2	.60	1.7	.43	1.5	.34	3.2	.55
Heart, kidney, etc	.5	.08	.6	.12	.2	.04	1.8	.16
Sausage and other	10.6	3.03	9.3	2.40	11.2	2.52	10.7	2.01
Poultry	16.1	4.88	10.4	2.17	9.0	1.96	12.6	2.81
Rabbit and other game	(1)	.02	1.9	.42	.4	.06	.3	.05
Fish:								
Canned	5.0	1.27	7.1	1.55	4.6	.70	4.9	.63
Fresh	12.9	2.05	8.6	1.69	4.7	.78	23.4	2.12
Cured	1.4	.32	.7	.18	.2	.04	.6	.05
Other sea food:								
Shellfish, in shell	.2	.02	1.1	.17	.4	.02	10.7	.09
Shellfish, shucked	.8	.19	1.1	.31	.7	.19	.3	.08
Miscellaneous sea food	.6	.07	.5	.09	.4	.04	.3	.04
Vegetables, nuts:								
Potatoes:								
Sweetpotatoes and yams	3.8	.14	5.0	.22	22.2	.54	42.0	.94
Potatoes	153.0	2.56	133.9	2.83	78.3	1.76	49.4	1.05
Dried legumes:								
Dried beans	4.3	.33	5.8	.44	8.8	.70	8.2	.57
Dried peas	.9	.09	.4	.03	2.2	.16	5.9	.43
Cooked or canned mature beans and peas	7.7	.65	4.3	.35	4.8	.33	1.8	.12
Nuts:								
Nuts, in shell	.7	.12	1.9	.32	.8	.21	1.5	.16
Nuts, shelled	.2	.03	.6	.32	.3	.09	(1)	(2)
Peanut butter	1.5	.30	2.3	.44	2.7	.49	.6	.12
Tomatoes:								
Tomato juice	1.6	.16	3.2	.26	1.2	.11	.1	.01
Tomato paste, puree, sauce	1.8	.29	4.0	.40	1.4	.18	1.4	.16
Tomatoes, canned	8.9	.80	6.3	.49	7.6	.56	3.1	.24
Tomatoes, fresh	15.3	1.21	27.5	1.62	28.2	1.34	9.5	.47
Other vegetables, fresh:								
Artichoke, French	.2	.01	2.9	.22	--------	--------	--------	--------
Asparagus	2.1	.25	8.0	.65	.2	.03	--------	--------
Beans, lima	.6	.05	1.5	.08	6.3	.46	6.4	.30
Beans, snap	6.2	.53	8.4	.52	13.6	.87	10.0	.61
Beets	3.2	.15	3.9	.12	1.2	.05	2.8	.09
Broccoli	.7	.06	.9	.05	--------	--------	--------	--------
Brussels sprouts	.1	.01	.3	.04	--------	--------	--------	--------
Cabbage	14.8	.53	10.2	.34	12.0	.38	24.3	.77
Carrots	11.7	.65	23.0	.80	3.6	.19	.3	.03
Cauliflower	2.0	.13	6.0	.33	.2	.02	--------	--------
Celery	4.0	.43	8.2	.60	2.0	.18	.6	.07
Collards	--------	--------	--------	--------	1.7	.06	8.8	.28
Corn	5.9	.22	8.1	.35	15.6	.40	11.8	.31
Cucumber	3.5	.25	3.8	.20	2.6	.09	.7	.03
Eggplant	.6	.06	.6	.05	1.1	.06	.1	.01
Leeks, garlic	.5	.03	.2	.04	.1	.01	.1	(2)
Lettuce and other salad greens	9.5	1.05	25.3	1.33	4.8	.46	.8	.07
Mushrooms	.4	.10	.5	.11	--------	--------	--------	--------
Mustard greens	(1)	(2)	.4	.01	.8	.03	1.6	.04
Okra	--------	--------	(1)	(2)	3.1	.20	4.6	.31
Onions	14.4	.70	17.3	.76	10.1	.51	6.8	.37
Parsnips	1.0	.03	1.1	.04	--------	--------	--------	--------
Peas	4.9	.36	14.3	.73	9.8	.45	4.0	.20
Peppers, green or red	1.8	.16	.7	.08	1.3	.09	.4	.05
Pumpkin	.8	.05	1.1	.07	.1	.01	.4	.01
Radishes	.8	.07	2.4	.16	.1	.01	--------	--------
Spinach	4.9	.34	7.5	.33	3.9	.23	.5	.03
Squash, summer	1.5	.07	7.6	.33	2.9	.12	1.8	.08
Turnips, rutabagas	4.1	.15	4.1	.12	2.3	.08	2.2	.04
Other	3.3	.54	3.9	.16	12.4	.45	27.8	.83
Other vegetables, canned:								
Asparagus	.6	.10	.8	.14	.7	.02	--------	--------
Beans, lima	.6	.06	.9	.08	.6	.13	.2	.01
Beans, snap	1.8	.19	4.1	.42	1.4	.13	.1	.03
Beets	1.2	.10	1.0	.08	.6	.04	.2	.01
Corn	4.4	.48	5.5	.59	4.3	.41	1.6	.05
Mixed vegetables	.2	.01	.6	.06	.2	.03	.1	.01

See footnotes at end of table.

TABLE 64.—*Estimated average per-capita consumption of and expenditure for food in a year, by region and color of family, 1934–36*—Continued

Item	Average per-capita consumption of and expenditure for food in—							
	North Atlantic cities by 843 white families		Pacific cities by 441 white families		East South Central cities by 282 white families		Southern cities by 222 Negro families	
Vegetables, nuts—Continued.								
Other vegetables, canned—Contd.	*Pounds*	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*	*Pounds*	*Dollars*
Peas	6.6	0.76	6.4	0.71	3.4	0.37	1.2	0.12
Pumpkin	.1	(2)	.6	.04	.2	.02	-------	-------
Sauerkraut	3.2	.21	2.3	.17	2.4	.16	.4	.04
Spinach	.7	.07	1.3	.12	.8	.08	.1	.01
Other	.3	.03	.2	.02	.3	.06	-------	-------
Vegetables, pickled, and relishes	4.6	.77	6.1	1.02	5.0	.75	1.5	.24
Fruits:								
Citrus fruits:								
Citrus fruit juice	.2	.01	.5	.05	.3	.03	.1	(2)
Grapefruit, canned	.6	.07	1.4	.11	.1	.02	-------	-------
Grapefruit, fresh	7.8	.41	18.0	.63	4.1	.19	.8	.04
Oranges	31.4	2.13	56.8	2.42	16.4	.85	2.1	.11
Other	3.5	.37	9.4	.60	5.4	.53	2.6	.23
Other fruits, fresh:								
Apples	34.8	1.49	48.0	1.64	22.0	1.04	4.9	.25
Apricots	.1	(2)	5.4	.28	-------	-------	-------	-------
Bananas	24.8	1.25	17.7	1.05	21.8	1.07	3.4	.15
Cantaloups or muskmelons	5.1	.23	14.2	.46	5.1	.14	3.6	.08
Cherries	.3	.04	1.9	.20	(2)	.01	-------	-------
Cranberries	.5	.08	.1	.01	.4	.08	-------	-------
Grapes	2.4	.18	6.0	.26	1.9	.08	1.9	.09
Peaches, nectarines	3.7	.28	17.8	.79	2.6	.15	4.0	.19
Pears	3.7	.26	5.9	.24	.6	.08	(1)	(2)
Pineapple	.7	.06	.5	.05	.4	.05	-------	-------
Plums and prunes	1.3	.10	3.3	.12	.5	.03	.1	(2)
Rhubarb	1.5	.06	3.6	.16	.1	.01	-------	-------
Strawberries	3.5	.45	8.8	.90	2.7	.23	1.5	.13
Watermelon	3.9	.09	13.9	.23	20.7	.21	30.8	.21
Other	2.1	.22	8.6	.88	1.1	.19	1.0	.08
Other fruits, canned:								
Applesauce	.7	.06	1.0	.07	.9	.08	.2	.03
Apricots	(1)	(2)	1.0	.10	.1	.03	.2	.01
Berries	.5	.07	4.0	.21	.6	.09	.3	.03
Cherries	.3	.05	.9	.17	.5	.07	-------	-------
Grape juice	.2	.04	1.1	.09	.4	.09	.1	.01
Mixed fruit	.6	.08	1.2	.18	-------	-------	(2)	.01
Peaches	3.6	.36	1.6	.33	3.0	.28	1.4	.12
Pears	1.2	.14	2.5	.26	.3	.08	-------	-------
Pineapple	2.2	.28	5.6	.66	2.1	.39	.7	.09
Pineapple juice	.7	.08	1.0	.08	.2	.02	-------	-------
Plums and prunes	.3	.02	.2	.03	.1	.01	.1	.01
Other	.5	.03	.6	.12	.1	.02	-------	-------
Other fruits, dried:								
Apricots	.2	.04	.3	.06	.2	.02	(1)	(2)
Dates, figs	.3	.06	2.0	.26	.2	.03	-------	-------
Peaches	.1	.02	-------	-------	.4	.06	.4	.07
Prunes	2.8	.25	4.2	.33	1.6	.13	.4	.05
Raisins	1.5	.14	2.4	.21	1.0	.11	.5	.05
Other	.2	.03	.2	.04	.7	.09	.4	.05
Sugars and sweets:								
Sugars:								
Cane or beet, refined	54.1	3.00	60.0	3.23	57.2	3.21	52.2	2.95
Other	1.6	.12	3.5	.28	.5	.04	.2	.01
Candies	1.3	.30	2.2	.55	1.5	.29	.6	.13
Sirups:								
Molasses	.8	.08	.5	.08	3.2	.46	3.2	.24
Corn sirup	.9	.08	1.0	.12	3.3	.26	7.4	.56
Honey	.2	.05	3.3	.43	.4	.08	-------	-------
Maple sirup	.7	.12	.8	.14	(2)	.01	-------	-------
Other	.2	.02	.8	.12	2.5	.20	.1	.01
Preserves, jellies, jams, butters	3.6	.60	6.9	1.02	8.4	1.57	2.6	.45
Miscellaneous foods:								
Chocolate, plain	.2	.06	.7	.17	.1	.03	-------	-------
Cocoa	1.0	.18	1.2	.20	1.1	.16	.3	.07
Coffee	9.6	2.25	13.2	3.43	7.8	1.88	5.8	1.37
Coffee substitutes	.4	.19	2.2	.66	3.3	.85	.1	.03
Soups	7.1	.90	8.0	1.00	2.2	.26	1.5	.15
Tea	1.9	1.06	1.2	.77	.7	.46	.2	.13

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[1] Less than 0.1 lb.

[2] Less than $0.01.

TABLE 65.—*Estimated average per-capita consumption of and expenditure for food in a year at specified spending levels, by region and color of family, 1935–37* [1]

Item	Average per-capita consumption of and expenditure for food by—									
	White families spending weekly for food $1.88–$2.49 per capita or $2.00–$2.66 per food-expenditure unit in—								Negro families spending weekly for food $1.25–$1.87 per capita or $1.33–$1.99 per food-expenditure unit in—	
	North Atlantic cities (240 families)		East North Central cities (77 families)		Pacific cities (137 families)		East South Central cities (97 families)		Southern cities (83 families)	
Bread and other baked goods:										
Bread:	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*
Rye	11.2	0.96	7.6	0.63	2.1	0.20	1.3	0.14	(2)	(3)
Wheat, graham (100-percent whole grain)	3.2	.30	1.8	.16	17.5	1.54	2.4	.25	------	------
Wheat, highly refined	69 9	6.02	88.2	6.53	41.8	3.56	40.2	3.79	7.2	0.72
Wheat, partially refined	2.0	.20	1.0	.09	------	------	.8	.08	------	------
Other loaf breads	23.5	2.12	------	------	29.8	2.49	18.5	1.78	18.8	1.84
Rolls, biscuits, sandwiches	11.7	1.60	14.7	1.90	8.4	1.20	5.8	.64	1.4	.23
Other baked goods	26.1	4.37	34.9	5.26	19.6	3.12	15.9	2.77	2.6	.43
Ready-to-eat cereals:										
Corn	2.0	.33	2.2	.41	1.6	.24	1.8	.34	.4	.08
Rice	.4	.09	.1	.04	.1	.04	.1	.02	------	------
Wheat	2.9	.56	4.2	.78	3.8	.68	1.8	.43	(2)	(3)
Other (including mixed grains)	.3	.09	.1	.02	.3	.06	.6	.14	------	------
Flour and other cereals:										
Flours and meals:										
Corn meal	.5	.03	2.3	.11	2.5	.18	26.9	.91	56.9	1.77
Prepared flour mixtures	1.3	.10	3.5	.30	3.0	.27	1.5	.14	.7	.08
Wheat flour	26.8	1.34	42.3	1.78	35.8	1.62	74.0	3.81	95.6	4.92
Other flours	.3	.04	------	------	------	------	------	------	------	------
Uncooked cereals:										
Hominy	------	------	(2)	(3)	.3	.02	3.2	.17	9.5	.39
Oat cereals	4.2	.35	4.2	.32	5.3	.49	3.8	.32	2.0	.19
Rice, polished	2.5	.21	3.6	.30	2.2	.18	4.9	.33	18.8	.98
Cornstarch	.5	.06	1.2	.12	.8	.08	(2)	(3)	(2)	(3)
Wheat cereals	1.7	.26	.9	.14	3.2	.39	.1	.02	------	------
Other cereals	.5	.10	1.5	.36	1.6	.25	.1	.02	------	------
Macaroni, spaghetti, vermicelli	9.9	.99	5.4	.59	4.4	.49	3.5	.42	4.1	.40
Noodles	1.7	.24	.9	.14	.7	.11	.3	.07	------	------
Eggs	27.9	6.35	31.5	5.72	35.0	6.78	39.3	7.72	16.6	3.02
Milk, cheese, ice cream:										
Cheese:										
American cheese	4.4	1.18	2.1	.56	3.9	.98	4.6	1.07	1.8	.40
Cottage cheese	1.2	.12	2.5	.38	2.6	.35	.4	.06	------	------
Other cheese	1.7	.64	2.4	.71	1.2	.40	.4	.14	(2)	(3)
Milk:										
Milk, condensed, evaporated	11.3	.91	13.0	1.05	24.0	1.86	18.2	1.57	13.5	1.26
Milk, dried (whole and skim)	.1	.01	------	------	------	------	.9	.14	.6	.12
Milk, fluid, whole	236.3	12.83	210.0	10.46	252.3	11.52	160.2	8.55	31.9	1.80
Milk, fluid, skim and buttermilk	1.7	.09	4.8	.25	7.9	.18	66.1	2.03	45.2	1.30
Milk, fluid, flavored	.6	.04	3.1	.16	.3	.01	2.2	.13	------	------
Ice cream	1.0	.28	2.4	.56	3.3	.61	.6	.16	.4	.13
Fats:										
Butter	18.7	6.44	13.0	4.48	17.3	5.96	9.1	2.92	8.1	2.66
Cream, heavy (whipping)	.8	.21	.2	.06	.8	.24	.6	.15	------	------
Cream, thin (coffee)	1.4	.36	.9	.17	1.6	.31	.2	.06	.1	.01
Other table fats	1.1	.21	5.2	.88	6.3	1.05	7.7	1.51	2.3	.45
Salad oils, mayonnaise, and dressings:										
Mayonnaise, salad dressings, and spreads	2.1	.51	3.2	.57	6.3	1.51	4.8	1.11	2.0	.41
Olive oil	1.6	.41	.1	.04	.1	.05	------	------	------	------
Other vegetable oils	1.1	.22	.4	.10	.9	.21	1.2	.33	1.6	.13
Shortenings:										
Lard	6.2	1.08	10.7	1.55	.8	.14	11.9	1.86	30.1	4.80
Other	1.2	.24	3.1	.60	7.3	1.35	16.7	2.51	5.9	.86
Fat meat:										
Bacon	2.4	.91	8.0	2.20	3.6	1.35	9.4	3.04	9.2	2.47
Salt pork, fat back	1.1	.26	.8	.15	.2	.07	7.4	1.68	23.5	4.67
Suet, and other	.2	.03	------	------	.1	.03	------	------	------	------

See footnotes at end of table.

TABLE 65.—*Estimated average per-capita consumption of and expenditure for food in a year at specified spending levels, by region and color of family, 1935–37*—Continued

Item	Average per-capita consumption of and expenditure for food by—									
	White families spending weekly for food $1.88–$2.49 per capita or $2.00–$2.66 per food-expenditure unit in—								Negro families spending weekly for food $1.25–$1.87 per capita or $1.33–$1.99 per food-expenditure unit in—	
	North Atlantic cities (240 families)		East North Central cities (77 families)		Pacific cities (137 families)		East South Central cities (97 families)		Southern cities (83 families)	
Lean meat:										
Beef:	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*
Beef, canned, or cooked	0.2	0.06	0.3	0.05	0.6	0.15	0.7	0.18	0.1	0.01
Beef, corned	2.6	.53	1.7	.40	1.6	.28	1.8	.40	.6	.13
Beef, dried	.3	.16	.5	.26	.3	.14	------	------	.1	.03
Steak, porterhouse	------	------	.8	.22	1.4	.36	2.0	.55	2.2	.49
Steak, sirloin	1.4	.56	1.6	.51	2.4	.76	1.4	.38	2.3	.43
Steak, round	17.2	4.15	6.9	1.81	14.4	2.67	11.5	2.48	6.6	1.29
Steak, other	1.1	.40	.4	.10	------	------	.6	.11	.5	.11
Roast, rib	1.5	.33	1.8	.37	2.4	.50	.9	.22	1.5	.31
Roast, chuck	7.6	1.99	7.6	1.40	3.0	.59	7.5	1.52	3.1	.57
Roast, round	1.6	.49	.4	.12	6.7	1.43	1.3	.30	1.0	.23
Stew	4.9	.95	2.6	.40	4.9	.69	4.6	.59	10.4	1.33
Other	3.0	.71	11.1	2.34	7.3	1.15	5.9	1.16	4.8	.71
Veal:										
Steak (cutlets)	1.0	.32	.4	.11	.4	.11	1.1	.25	.4	.07
Chops	1.0	.29	1.7	.41	1.5	.39	.9	.18	3.8	.57
Roast	2.3	.56	.5	.08	1.1	.15	1.2	.22	1.5	.27
Stew	1.2	.30	1.4	.19	.1	.02	.2	.03	------	------
Other	.3	.08	------	------	.1	.04	.2	.04	------	------
Mutton and lamb:										
Chops	2.0	.62	.3	.11	2.9	.74	------	------	.1	.04
Stew	.9	.20	.4	.10	2.2	.34	.2	.03	.5	.07
Other	2.7	.58	------	------	4.4	.96	.6	.13	.7	.09
Pork:										
Pork, canned or cooked (fresh and smoked)	3.6	1.31	2.3	1.08	1.1	.40	1.4	.67	.4	.17
Chops	5.5	1.69	5.5	1.64	1.2	.35	3.0	.84	2.5	.61
Steaks	.3	.07	.6	.15	.4	.10	.3	.09	------	------
Roasts	4.1	1.05	9.2	2.15	1.1	.24	.8	.18	7.4	1.48
Other fresh	1.0	.20	2.8	.50	1.8	.37	3.4	.78	9.5	1.04
Pork, pickled	.3	.05	------	------	.1	.03	------	------	------	------
Whole ham, shoulder	2.5	.69	.9	.30	(2)	.01	2.6	.79	.4	.12
Picnic	.2	.06	------	------	------	------	.2	.04	------	------
Sliced ham	.4	.19	.4	.14	.3	.13	.4	.13	1.8	.51
Other cured	1.2	.38	2.5	.43	1.9	.32	2.3	.11	2.2	.40
Miscellaneous meats, meat products:										
Deviled meats, sandwich fillings	.8	.23	.9	.23	.9	.21	1.0	.21	.3	.05
Liver	2.0	.44	3.4	.72	1.9	.46	1.6	.34	2.5	.45
Heart, kidney, etc	.5	.07	.6	.10	.1	.01	.3	.06	1.6	.20
Sausage and other	9.6	2.64	33.6	7.23	8.2	1.99	13.6	3.05	13.7	2.35
Poultry	10.9	3.33	5.1	1.26	3.4	1.02	13.4	2.89	11.4	2.63
Rabbit and other game	------	------	------	------	1.4	.35	.8	.10	------	------
Fish:										
Canned	4.3	1.07	3.2	.57	8.1	1.39	5.0	.78	4.3	.54
Fresh	10.8	1.58	1.8	.40	6.0	1.16	5.0	.83	23.9	2.17
Cured	1.4	.32	.4	.14	.3	.09	.2	.03	.2	.03
Other sea food:										
Shellfish, in shell	.3	.03	------	------	.1	.02	------	------	.2	.03
Shellfish, shucked	.5	.16	1.5	.50	.6	.19	.4	.10	.4	.16
Miscellaneous sea food	.6	.06	(2)	.02	.6	.09	.3	.04	.1	.03
Vegetables, nuts:										
Potatoes:										
Sweetpotatoes and yams	3.7	.11	5.4	.26	4.8	.21	25.2	.63	47.2	1.11
Potatoes	146.4	2.25	123.2	4.12	112.0	2.13	85.7	2.03	49.2	1.14
Dried legumes:										
Dried beans	3.4	.25	9.5	.73	4.7	.35	8.6	.73	9.1	.69
Dried peas	.9	.09	.4	.04	.2	.01	2.2	.16	6.6	.48
Cooked or canned mature beans and peas	7.3	.61	8.4	.58	3.9	.38	4.0	.30	1.3	.09

See footnotes at end of table.

TABLE 65.—*Estimated average per-capita consumption of and expenditure for food in a year at specified spending levels, by region and color of family, 1935–37*—Continued

Item	Average per-capita consumption of and expenditure for food by—									
	White families spending weekly for food $1.88–$2.49 per capita or $2.00–$2.66 per food-expenditure unit in—								Negro families spending weekly for food $1.25–$1.87 per capita or $1.33–$1.99 per food-expenditure unit in—	
	North Atlantic cities (240 families)		East North Central cities (77 families)		Pacific cities (137 families)		East South Central cities (97 families)		Southern cities (83 families)	
Vegetables, nuts—Continued.										
Nuts:	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*
Nuts, in shell	0.4	0.08	0.8	0.10	01.3	0.24	02.3	0.25	02.2	0.13
Nuts, shelled	.1	.06	.9	.24	.3	.12	.5	.13	(2)	.01
Peanut butter	1.4	.27	2.3	.31	2.4	.43	3.5	.66	.6	.11
Tomatoes:										
Tomato juice	.8	.08	.8	.08	1.4	.13	1.6	.15	.3	.03
Tomato paste, puree, sauce	1.3	.20	1.4	.14	4.2	.43	.9	.11	2.1	.23
Tomatoes, canned	8.2	.72	8.2	.66	7.5	.57	9.4	.69	4.1	.31
Tomatoes, fresh	13.6	.99	7.2	.44	25.2	1.34	32.3	1.60	9.8	.60
Other vegetables, fresh:										
Artichoke, French	.1	.01	------	------	1.8	.16	------	------	------	------
Asparagus	1.8	.18	.7	.06	4.5	.37	.3	.05	------	------
Beans, lima	.6	.07	1.3	.07	2.0	.07	7.8	.58	4.0	.21
Beans, snap	5.8	.48	2.8	.22	6.3	.39	12.4	.89	11.6	.80
Beets	2.7	.13	1.2	.05	3.2	.07	1.5	.09	4.4	.11
Broccoli	.6	.06	------	------	1.2	.06	------	------	------	------
Cabbage	11.9	.38	12.2	.50	9.3	.26	13.1	.45	26.0	.85
Carrots	10.4	.55	6.0	.41	22.9	.79	4.5	.27	.4	.03
Cauliflower	1.3	.08	1.0	.09	3.4	.22	.5	.05	------	------
Celery	3.2	.35	3.6	.33	5.7	.40	3.1	.25	1.0	.12
Collards	------	------	------	------	------	------	2.9	.10	12.7	.40
Corn	2.8	.09	4.3	.15	7.4	.31	19.3	.48	13.4	.32
Cucumber	2.9	.17	2.8	.25	2.6	.18	2.7	.12	.8	.03
Eggplant	.6	.05	.2	.03	.7	.05	1.2	.08	------	------
Leeks, garlic	.5	.03	------	------	(2)	.01	(2)	(3)	.2	.03
Lettuce and other salad greens	6.6	.74	8.6	.89	21.9	1.14	5.6	.53	1.1	.12
Mushrooms	.2	.05	.2	.08	.2	.09	------	------	------	------
Mustard greens	------	------	------	------	.4	.02	.6	.03	1.8	.04
Okra	------	------	------	------	------	------	3.7	.28	5.4	.36
Onions	12.4	.53	15.8	.70	11.8	.50	9.2	.46	6.9	.37
Parsnips	1.6	.06	.4	.02	.7	.03	------	------	------	------
Peas	3.4	.27	2.4	.15	9.8	.48	6.0	.38	6.0	.34
Peppers, green or red	1.6	.16	.8	.16	.7	.07	2.4	.17	.6	.08
Pumpkin	1.1	.07	------	------	.8	.05	------	------	------	------
Radishes	.7	.04	2.7	.26	1.7	.07	.2	.02	------	------
Spinach	2.7	.16	1.7	.09	7.0	.31	3.8	.28	1.0	.05
Squash, summer	1.5	.06	------	------	7.4	.33	2.7	.11	1.1	.04
Turnips, rutabagas	3.0	.11	3.4	.13	2.8	.11	1.8	.05	3.1	.07
Other	3.6	.23	.2	.04	1.7	.11	13.6	.59	34.6	.85
Other vegetables, canned:										
Asparagus	.5	.08	.3	.04	.1	.03	.1	.02	------	------
Beans, lima	.8	.08	.4	.05	.6	.08	.8	.06	.6	.05
Beans, snap	1.4	.13	6.7	.61	3.8	.30	.9	.09	------	------
Beets	1.1	.09	.4	.03	.4	.03	.3	.02	.2	(3)
Corn	4.0	.44	8.9	.80	5.0	.52	4.2	.42	.7	.08
Mixed vegetables	.3	.02	------	------	.4	.02	.4	.05	.3	.03
Peas	5.4	.62	6.5	.42	4.7	.50	5.4	.55	1.2	.09
Pumpkin	.1	.01	.8	.06	.6	.04	.1	.01	------	------
Sauerkraut	3.4	.19	3.9	.24	1.2	.09	3.0	.22	.2	.01
Spinach	.4	.06	.7	.07	.6	.06	.3	.04	.4	.04
Other	.4	.04	.8	.08	.9	.07	.8	.11	------	------
Vegetables, pickled and relishes	4.3	.69	8.8	1.23	3.7	.72	6.0	1.04	2.5	.39
Fruits:										
Citrus fruits:										
Citrus fruit juice	(2)	.01	.4	.03	.2	.02	.3	.04	------	------
Grapefruit, canned	.6	.07	.6	.06	.4	.03	.3	.03	------	------
Grapefruit, fresh	6.1	.31	7.4	.42	11.3	.43	4.2	.24	.2	.01
Oranges	24.3	1.60	23.9	1.59	49.0	1.85	24.9	1.34	3.0	.17
Other	2.8	.26	2.4	.26	7.7	.43	5.2	.53	3.6	.28

See footnotes at end of table.

Table 65.—*Estimated average per-capita consumption of and expenditure for food in a year at specified spending levels, by region and color of family, 1935–37*—Continued

Item	Average per-capita consumption of and expenditure for food by—									
	White families spending weekly for food $1.88-$2.49 per capita or $2.00-$2.66 per food-expenditure unit in—								Negro families spending weekly for food $1.25-$1.87 per capita or $1.33-$1.99 per food-expenditure unit in—	
	North Atlantic cities (240 families)		East North Central cities (77 families)		Pacific cities (137 families)		East South Central cities (97 families)		Southern cities (83 families)	
	Lbs.	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*	*Lbs.*	*Dol.*
Fruits—Continued.										
Other fruits, fresh:										
Apples	29.4	1.18	41.2	2.08	46.4	1.46	25.6	1.21	9.3	0.39
Apricots	.1.	.01	(2)	.01	4.1	.24	------	------	------	------
Bananas	23.5	1.15	22.0	1.30	17.3	1.01	24.5	1.21	2.2	.12
Cantaloups or muskmelons	4.8	.12	.8	.05	13.3	.40	7.0	.22	2.7	.07
Cherries	.2	.03	.2	.03	2.1	.15	------	------	------	------
Cranberries	.4	.08	.4	.05	------	------	.9	.20	------	------
Grapes	2.3	.15	.4	.04	6.4	.24	.8	.05	.6	.05
Peaches, nectarines	2.3	.16	.6	.05	20.9	.80	2.1	.13	5.9	.25
Pears	2.9	.19	1.0	.08	3.9	.19	.6	.08	.2	.01
Pineapple	.4	.03	1.0	.12	.6	.06	.6	.05	------	------
Plums and prunes	1.5	.11	.6	.06	1.6	.06	.1	.01	------	------
Rhubarb	1.5	.06	3.0	.21	3.0	.07	------	------	------	------
Strawberries	3.4	.38	3.9	.46	4.8	.38	1.7	.23	.4	.04
Watermelon	3.6	.07	------	------	11.9	.23	21.1	.24	37.8	.31
Other	2.1	.18	.3	.04	7.9	.85	1.1	.15	1.1	.09
Other fruits, canned:										
Applesauce	.5	.04	1.3	.10	1.5	.11	1.1	.12	.2	.01
Apricots	------	------	.2	.03	.6	.08	.2	.04	------	------
Berries	.6	.08	.2	.04	1.1	.20	(2)	.04	.3	.03
Cherries	.4	.05	1.5	.15	1.0	.13	.5	.05	------	------
Grape juice	.1	.02	------	------	.1	.02	(2)	.01	------	------
Mixed fruit	.2	.03	.2	.03	1.6	.22	.1	.01	------	------
Peaches	2.9	.32	6.0	.63	4.4	.43	4.2	.43	2.0	.19
Pears	1.2	.14	1.4	.18	2.6	.23	.7	.09	------	------
Pineapple	1.8	.23	2.8	.35	3.1	.36	3.6	.52	.3	.05
Pineapple juice	.1	.02	------	------	.8	.08	.2	.02	------	------
Plums and prunes	.4	.04	1.0	.10	.6	.04	.1	.01	.3	.04
Other	(2)	.01	------	------	.6	.08	.3	.04	------	------
Other fruits, dried:										
Apricots	.1	.02	1.0	.14	.4	.05	.3	.04	.1	.01
Dates, figs	.2	.04	(2)	.02	1.1	.14	.2	.03	------	------
Peaches	.1	.02	.2	.02	------	------	.4	.06	1.0	.11
Prunes	2.2	.18	1.5	.13	4.2	.30	.9	.07	.5	.08
Raisins	1.1	.12	.8	.08	2.1	.17	1.5	.14	.7	.07
Other	.2	.05	------	------	.1	.02	.7	.11	.1	.01
Sugars and sweets:										
Sugars:										
Cane or beet, refined	50.5	2.79	42.7	1.90	50.7	2.69	63.6	3.52	55.6	3.26
Other	1.8	.11	2.8	.20	2.7	.24	.6	.06	------	------
Candies	1.5	.30	2.0	.32	1.5	.29	1.0	.30	.7	.15
Sirups:										
Molasses	.8	.09	.4	.06	.4	.07	.4	.03	1.3	.11
Corn sirup	1.0	.10	.9	.08	.9	.08	2.4	.20	6.8	.53
Honey	.2	.08	.2	.02	1.1	.13	.5	.10	------	------
Maple sirup	1.4	.24	.6	.13	.4	.07	------	------	------	------
Other	.5	.09	.9	.11	.5	.08	4.3	.34	1.6	.17
Preserves, jellies, jams, butters	3.3	.55	4.1	.61	4.9	.92	8.3	1.53	3.8	.61
Miscellaneous foods:										
Chocolate, plain	.2	.06	.1	.02	.7	.20	.1	.03	------	------
Cocoa	1.1	.20	1.1	.16	1.0	.16	.9	.17	.4	.08
Coffee	8.9	2.07	13.6	3.05	9.1	2.27	10.2	2.51	6.9	1.65
Coffee substitutes	(2)	.04	(2)	.04	3.2	.92	3.3	.73	------	------
Soups	6.0	.71	3.9	.51	8.2	.94	2.0	.23	3.2	.39
Tea	1.8	1.02	.5	.20	.8	.49	.7	.50	.2	.16

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[1] Data from white families in North Atlantic, Pacific and East South Central cities cover 12 months, March 1935–February 1936; from white families in East North Central cities, March 1936–February 1937; and from Negro families in Southern cities, 9 months, March 1935–November 1935.

[2] Less than 0.1 pound.

[3] Less than $0.01.

TABLE 66.—*Average nutritive value of diets per capita per day, by color of family, region, level of expenditure for food, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food, [1] and season	Value per capita per day								
	Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin A	Vitamin B_1	Ascorbic acid	Riboflavin
White:									
North Atlantic:									
$1.25–$1.87:	*Calories*	*Grams*	*Grams*	*Grams*	*Milligrams*	*International Units*	*International Units*	*Milligrams*	*Sherman units*
Winter 1934–35	2, 130	64	0. 56	1. 02	10. 4	2, 100	320	37. 0	440
Spring 1935	1, 970	61	. 59	1. 00	9. 6	1, 800	310	35. 5	450
Summer 1935	1, 940	60	. 56	. 97	9. 5	1, 600	290	39. 0	420
Fall 1935	2, 020	67	. 56	1. 05	10. 3	2, 000	300	40. 0	440
Winter 1935–36	1, 940	59	. 66	1. 00	8. 8	2, 700	260	36. 0	480
$1.88–$2.49:									
Spring 1935	2, 320	72	. 68	1. 15	12. 1	2, 600	380	55. 0	550
Summer 1935	2, 310	71	. 73	1. 18	11. 3	2, 800	370	61. 5	570
Fall 1935	2, 430	78	. 72	1. 25	12. 4	2, 700	390	51. 5	580
Winter 1935–36	2, 300	75	. 67	1. 17	11. 7	2, 400	360	45. 0	540
$2.50–$3.12:									
Winter 1934–35	2, 780	88	. 78	1. 40	15. 1	2, 600	480	62. 0	660
Spring 1935	2, 780	89	. 82	1. 42	14. 6	3, 700	460	64. 0	680
Summer 1935	2, 580	85	. 88	1. 41	13. 5	2, 900	440	73. 5	670
Fall 1935	2, 750	89	. 84	1. 41	14. 3	3, 600	470	70. 5	700
Winter 1935–36	2, 510	88	. 74	1. 35	14. 2	3, 700	480	59. 5	667
$3.13–$3.74:									
Spring 1935	3, 160	101	. 91	1. 63	17. 3	5, 000	570	88. 5	820
Summer 1935	2, 910	93	. 86	1. 50	15. 2	4, 000	510	85. 5	720
Fall 1935	3, 200	102	. 92	1. 63	16. 8	4, 000	590	81. 5	810
Winter 1935–36	2, 900	96	. 93	1. 54	15. 9	3, 300	520	77. 5	830
$3.75–$4.37:									
Winter 1934–35	3, 420	120	1. 06	1. 91	20. 9	5, 200	700	106. 5	970
Spring 1935	3, 590	118	1. 10	1. 91	19. 9	6, 900	700	103. 5	980
Summer 1935	3, 370	114	1. 01	1. 80	18. 4	5, 200	610	94. 5	910
Winter 1935–36	3, 290	114	. 90	1. 75	19. 5	5, 200	600	80. 0	990
$4.38 and over:									
Spring 1935	4, 120	135	1. 16	2. 12	22. 3	6, 900	690	101. 0	1,180
Winter 1935–36	3, 530	111	1. 07	1. 80	18. 2	7, 200	680	84. 5	950
East North Central:									
$1.25–$1.87:									
Spring 1935	2, 120	68	. 64	1. 13	11. 8	2, 700	360	43. 5	510
Summer 1935	2, 100	61	. 62	1. 00	9. 8	3, 300	300	48. 0	470
Spring 1936	2, 100	62	. 58	. 99	9. 8	1, 900	330	37. 0	440
Summer 1936	1, 900	60	. 50	. 92	9. 4	2, 100	320	33. 0	440
Fall 1936	2, 200	64	. 52	1. 00	10. 5	2, 500	380	45. 5	410
$1.88–$2.49:									
Spring 1935	2, 470	74	. 66	1. 18	12. 3	2, 600	390	54. 0	570
Summer 1935	2, 520	76	. 77	1. 26	12. 8	2, 600	380	67. 0	600
Spring 1936	2, 490	74	. 65	1. 19	12. 4	1, 900	420	56. 0	530
Summer 1936	2, 520	80	. 68	1. 26	12. 7	2, 000	420	52. 5	610
Fall 1936	2, 570	76	. 66	1. 20	12. 8	2, 200	470	52. 5	560
Winter 1936–37	2, 610	82	. 64	1. 28	14. 0	2, 700	500	43. 5	580
$2.50–$3.12:									
Spring 1935	3, 050	95	. 90	1. 59	17. 0	4, 200	510	79. 0	740
Summer 1935	3, 220	89	. 77	1. 42	15. 0	3, 800	460	79. 5	630
Spring 1936	3, 010	92	. 80	1. 46	15. 5	3, 800	540	76. 5	680
Summer 1936	2, 760	87	. 72	1. 33	14. 4	3, 000	520	73. 5	660
Fall 1936	3, 120	90	. 87	1. 46	16. 4	3, 700	580	72. 0	710
Winter 1936–37	3, 080	101	. 86	1. 60	16. 2	2, 600	640	50. 5	760
$3.13–$3.74:									
Spring 1935	3, 480	107	1. 04	1. 75	17. 7	3, 400	520	79. 0	820
Spring 1936	3, 570	106	. 93	1. 67	17. 2	3, 500	620	87. 0	790
Summer 1936	3, 520	110	. 85	1. 68	18. 3	2, 700	640	76. 0	780
Fall 1936	3, 550	105	. 97	1. 74	17. 7	2, 400	700	64. 5	790
$3.75–$4.37:									
Summer 1936	3, 870	123	. 85	1. 82	21. 6	5, 000	780	105. 5	990
West North Central:									
$1.25–$1.87:									
Spring 1936	1, 990	63	. 56	1. 00	10. 5	2, 400	360	42. 5	510
$1.88–$2.49:									
Spring 1936	2, 380	77	. 80	1. 29	12. 4	3, 400	450	64. 0	640
Summer 1936	2, 550	80	. 74	1. 29	11. 9	2, 000	450	41. 0	580
$2.50–$3.12:									
Spring 1936	2, 750	86	. 77	1. 34	14. 0	3, 700	500	69. 5	680
Summer 1936	2, 890	90	. 75	1. 36	14. 0	3, 500	490	62. 0	670
$3.13–$3.74:									
Spring 1936	3, 100	100	. 84	1. 58	16. 9	4, 400	610	89. 0	800
Summer 1936	3, 250	102	. 96	1. 67	17. 2	3, 600	700	94. 0	820
South Atlantic:									
$1.25–$1.87:									
Fall 1935	2, 350	63	. 62	1. 16	11. 7	3, 500	390	46. 5	480
Spring 1936	1, 960	56	. 53	1. 03	10. 4	1, 800	350	44. 0	380

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[1] See footnote 1, table 3.

Table 66.—*Average nutritive value of diets per capita per day, by color of family, region, level of expenditure for food, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Value per capita per day								
	Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin B_1			
	Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin A	Vitamin B_1	Ascorbic acid	Riboflavin
White—Continued.									
South Atlantic—Contd.									
$1.88–$2.49:	*Calories*	*Grams*	*Grams*	*Grams*	*Milligrams*	*International Units*	*International Units*	*Milligrams*	*Sherman units*
Fall 1935	2,580	75	0.72	1.34	14.0	4,100	460	68.0	610
Spring 1936	2,790	86	.88	1.56	15.1	4,300	450	58.5	660
$2.50–$3.12:									
Fall 1935	2,850	86	.81	1.48	15.6	4,300	500	60.0	630
Spring 1936	3,050	92	.95	1.56	16.6	6,300	550	75.5	700
$3.13–$3.74:									
Spring 1936	3,050	101	1.05	1.73	18.1	7,100	700	102.5	870
East South Central:									
$0.63–$1.24:									
Spring 1935	2,110	55	.65	1.15	11.5	5,300	270	46.0	370
Summer 1935	1,950	45	.45	.92	8.3	1,700	210	33.5	230
$1.25–$1.87:									
Spring 1935	2,350	64	.74	1.26	11.8	2,900	410	42.0	470
Summer 1935	2,400	61	.65	1.22	11.9	2,500	390	54.0	410
Fall 1935	2,400	63	.73	1.27	11.8	4,100	390	47.5	450
Winter 1935–36	2,470	67	.80	1.36	14.1	4,200	470	41.0	490
$1.88–$2.49:									
Spring 1935	2,980	81	.93	1.54	15.0	6,100	430	62.0	650
Summer 1935	2,680	72	.86	1.41	12.6	2,800	410	67.5	570
Fall 1935	2,820	77	.84	1.45	13.6	5,400	460	63.0	590
Winter 1935–36	2,810	80	.89	1.54	15.0	3,600	490	61.5	590
$2.50–$3.12:									
Spring 1935	3,120	86	1.11	1.70	16.9	7,900	560	91.0	770
Summer 1935	3,330	93	1.26	1.87	15.9	3,400	530	78.5	830
Fall 1935	3,090	93	1.25	1.85	17.0	7,000	590	78.5	880
Winter 1935–36	3,200	95	1.11	1.81	17.2	5,900	610	74.0	740
West South Central:									
$1.25–$1.87:									
Spring 1936	2,150	61	.63	1.00	10.0	2,000	290	27.0	420
$1.88–$2.49:									
Spring 1936	2,480	76	.75	1.28	12.7	2,800	400	40.5	570
$2.50–$3.12:									
Spring 1936	3,370	90	.78	1.41	16.3	5,700	540	70.5	710
Mountain:									
$1.25–$1.87:									
Summer 1935	1,990	59	.66	1.03	9.3	3,400	290	59.5	480
$1.88–$2.49:									
Spring 1935	2,210	73	.89	1.29	12.8	4,600	400	89.5	680
Summer 1935	2,470	70	.75	1.17	11.8	3,400	370	74.0	560
$2.50–$3.12:									
Spring 1935	2,780	86	.94	1.41	13.5	3,600	420	73.0	710
Summer 1935	2,520	80	.88	1.34	13.7	3,500	440	82.0	710
$3.13–$3.74:									
Summer 1935	3,190	98	1.05	1.59	15.8	3,700	440	79.5	760
Pacific:									
$1.25–$1.87:									
Summer 1935	1,860	58	.59	.97	9.3	2,600	320	55.0	460
Winter 1935–36	2,130	66	.66	1.18	13.0	3,600	450	70.0	570
$1.88–$2.49:									
Spring 1935	2,450	77	.74	1.27	12.8	3,900	410	82.0	620
Summer 1935	2,390	71	.82	1.25	12.1	3,400	400	73.5	600
Fall 1935	2,630	78	.86	1.33	12.8	3,500	450	57.0	680
Winter 1935–36	2,320	76	.80	1.29	13.0	4,100	440	72.0	680
$2.50–$3.12:									
Spring 1935	3,030	87	.93	1.49	14.9	4,200	480	90.0	710
Summer 1935	2,750	84	.86	1.40	14.7	4,400	490	97.5	720
Fall 1935	3,120	93	.91	1.59	16.4	4,400	500	76.5	740
Winter 1935–36	2,860	93	.87	1.52	16.2	4,200	500	85.0	710
$3.13–$3.74:									
Spring 1935	3,430	105	1.08	1.81	18.8	6,000	570	104.0	860
Summer 1935	3,320	97	1.01	1.64	17.8	6,800	530	112.5	800
Fall 1935	3,570	103	1.09	1.80	18.3	4,700	630	103.5	890
Winter 1935–36	3,280	98	1.06	1.67	16.9	4,700	530	89.5	830
$3.75–$4.37:									
Spring 1935	3,410	107	1.07	1.73	18.8	6,800	570	121.5	900
Summer 1935	3,590	113	1.09	1.84	18.7	4,700	630	114.0	870
Winter 1935–36	3,760	113	1.02	1.79	20.3	5,600	650	108.0	910
$4.38 and over:									
Spring 1935	4,870	142	1.48	2.36	24.9	11,000	780	161.5	1,150
Summer 1935	4,660	135	1.39	2.25	23.5	5,700	760	164.0	1,160
Winter 1935–36	4,350	144	1.10	2.25	24.9	8,000	740	126.5	1,100

TABLE 66.—*Average nutritive value of diets per capita per day, by color of family, region, level of expenditure for food, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Value per capita per day								
	Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin A	Vitamin B₁	Ascorbic acid	Riboflavin
Negro:									
South:									
$0.63–$1.24:	*Calories*	*Grams*	*Grams*	*Grams*	*Milligrams*	*International Units*	*International Units*	*Milligrams*	*Sherman units*
Spring 1935	1,890	51	0.44	0.97	10.7	4,200	270	29.0	340
Summer 1935	1,930	49	.43	1.00	10.6	1,800	280	30.0	260
Fall 1935	2,010	50	.45	.99	10.2	4,300	290	32.0	310
$1.25–$1.87:									
Spring 1935	2,890	72	.76	1.42	15.8	9,200	500	62.0	560
Summer 1935	2,860	67	.64	1.34	14.2	3,700	420	52.5	430
Fall 1935	2,650	71	.64	1.29	14.2	6,400	410	49.5	500
$1.88–$2.49:									
Spring 1935	3,190	88	.84	1.57	19.1	9,500	620	66.0	700
Summer 1935	3,700	92	.74	1.78	18.0	3,200	500	53.0	630
Fall 1935	3,680	84	.86	1.74	18.2	6,500	610	59.5	570
$2.50–$3.12:									
Summer 1935	4,030	104	.97	1.92	19.0	5,400	690	81.0	720
Fall 1935	4,400	119	1.19	2.21	24.3	10,600	730	88.5	900

TABLE 67.—*Average nutritive value of diets per nutrition-requirement unit per day, by color of family, region, level of expenditure for food, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food,[1] and season	International scale energy value	Value per nutrition-requirement unit per day (Bureau of Home Economics scale)								
		Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin A	Vitamin B₁	Ascorbic acid	Riboflavin
White:										
North Atlantic:										
$1.25–$1.87:	*Calories*	*Calories*	*Grams*	*Gram*	*Grams*	*Milligrams*	*International Units*	*International Units*	*Milligrams*	*Sherman units*
Winter 1934–35	2,780	2,680	65	0.42	1.10	12.2	2,200	350	39.5	490
Spring 1935	2,620	2,550	62	.45	1.07	11.2	1,900	360	38.5	480
Summer 1935	2,480	2,390	61	.42	1.02	10.8	1,700	330	42.0	440
Fall 1935	2,610	2,530	67	.42	1.12	11.8	2,100	340	43.5	460
Winter 1935–36	2,650	2,610	62	.50	1.06	10.5	2,900	300	39.5	520
$1.88–$2.49:										
Spring 1935	2,950	2,910	72	.52	1.21	13.6	2,800	430	59.5	580
Summer 1935	2,940	3,040	72	.56	1.24	12.8	3,000	410	66.0	590
Fall 1935	3,060	3,060	79	.56	1.31	13.8	2,800	430	55.0	600
Winter 1935–36	2,880	2,810	75	.52	1.23	13.1	2,500	400	48.5	570
$2.50–$3.12:										
Winter 1934–35	3,410	3,480	88	.62	1.46	16.3	2,700	510	64.0	700
Spring 1935	3,410	3,440	90	.65	1.48	15.8	3,800	490	67.5	710
Summer 1935	3,170	3,170	85	.69	1.46	14.6	3,000	480	76.5	690
Fall 1935	3,390	3,420	89	.66	1.47	15.6	3,700	510	75.0	720
Winter 1935–36	2,960	3,020	87	.60	1.39	15.0	3,800	500	61.5	680
$3.13–$3.74:										
Spring 1935	3,780	3,970	101	.74	1.68	18.3	5,100	590	92.0	830
Summer 1935	3,440	3,680	93	.71	1.53	15.8	4,000	530	88.0	730
Fall 1935	3,940	4,070	103	.74	1.69	18.2	4,200	630	86.0	840
Winter 1935–36	3,490	3,650	96	.73	1.60	17.0	3,400	560	81.5	850
$3.75–$4.37:										
Winter 1934–35	4,030	4,000	120	.88	1.93	21.4	5,200	710	108.0	980
Spring 1935	4,380	4,500	119	.90	1.96	21.0	7,100	740	107.5	1,000
Summer 1935	3,950	4,080	114	.83	1.85	19.3	5,300	640	98.5	930
Winter 1935–36	3,780	3,980	113	.74	1.77	20.0	5,300	610	81.0	900
$4.38 and over:										
Spring 1935	4,930	5,050	133	.94	2.19	23.4	7,000	720	105.0	1,200
Winter 1935–36	4,080	4,140	111	.89	1.82	18.7	7,300	690	85.0	960
East North Central:										
$1.25–$1.87:										
Spring 1935	2,820	2,680	69	.48	1.21	13.6	2,800	420	48.0	540
Summer 1935	2,650	2,570	61	.47	1.05	10.9	3,500	330	51.5	490
Spring 1936	2,680	2,600	62	.43	1.06	11.2	2,000	380	40.5	460
Summer 1936	2,540	2,400	61	.37	1.01	11.4	2,300	390	37.0	470
Fall 1936	2,940	2,830	65	.40	1.07	12.2	2,600	450	50.5	440

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[1] See footnote 1, table 3.

TABLE 67.—*Average nutritive value of diets per nutrition-requirement unit per day, by color of family, region, level of expenditure for food, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	International scale energy value	Value per nutrition-requirement unit per day (Bureau of Home Economics scale)								
		Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin A	Vitamin B_1	Ascorbic acid	Riboflavin
White—Continued.										
East North Central—Continued.										
$1.88–$2.49:	*Calories*	*Calories*	*Grams*	*Gram*	*Grams*	*Milligrams*	*International Units*	*International Units*	*Milligrams*	*Sherman units*
Spring 1935	2,930	2,950	74	0.54	1.21	13.1	2,600	410	56.0	590
Summer 1935	3,180	3,160	77	.60	1.32	14.3	2,700	420	71.5	620
Spring 1936	3,290	3,200	76	.50	1.26	14.3	2,000	490	61.0	560
Summer 1936	3,370	3,260	83	.53	1.34	14.9	2,100	490	58.5	650
Fall 1936	3,180	3,070	76	.52	1.26	14.2	2,300	520	57.5	590
Winter 1936–37	3,400	3,200	85	.49	1.36	16.3	2,900	590	47.5	620
$2.50–$3.12:										
Spring 1935	3,780	3,820	95	.70	1.67	18.9	4,400	560	85.0	780
Summer 1935	4,020	3,980	90	.60	1.49	16.8	3,900	510	85.5	660
Spring 1936	3,650	3,550	92	.64	1.51	16.5	3,900	580	80.0	690
Summer 1936	3,410	3,370	88	.58	1.40	16.1	3,200	580	79.0	690
Fall 1936	3,830	3,760	91	.70	1.52	17.8	3,800	630	75.5	730
Winter 1936–37	3,880	3,720	103	.68	1.67	17.9	2,700	700	54.0	790
$3.13–$3.74:										
Spring 1935	4,220	4,190	106	.84	1.81	18.9	3,500	550	83.0	840
Spring 1936	4,500	4,420	114	.74	1.82	19.5	3,700	720	90.0	880
Summer 1936	4,220	4,190	111	.70	1.73	19.4	2,800	680	79.5	800
Fall 1936	4,490	4,330	106	.77	1.81	19.4	2,500	770	68.5	810
$3.75–$4.37:										
Summer 1936	4,440	4,440	122	.71	1.85	22.0	5,100	790	107.5	1,000
West North Central:										
$1.25–$1.87:										
Spring 1936	2,470	2,310	63	.42	1.05	11.8	2,500	390	45.0	530
$1.88–$2.49:										
Spring 1936	3,160	3,030	78	.60	1.38	14.4	3,600	520	70.5	680
Summer 1936	3,480	3,230	81	.55	1.40	14.2	2,200	540	46.0	620
$2.50–$3.12:										
Spring 1936	3,400	3,240	87	.61	1.40	15.3	3,900	540	73.5	710
Summer 1936	3,560	3,430	90	.58	1.43	15.5	3,700	540	66.5	690
$3.13–$3.74:										
Spring 1936	3,740	3,720	100	.67	1.63	18.1	4,600	650	93.5	820
Summer 1936	3,720	3,750	100	.78	1.70	17.8	3,600	720	96.0	820
South Atlantic:										
$1.25–$1.87:										
Fall 1935	3,040	2,990	65	.48	1.24	13.4	3,700	450	50.5	500
Spring 1936	2,590	2,490	58	.40	1.11	12.1	1,900	420	49.0	410
$1.88–$2.49:										
Fall 1935	3,150	3,150	75	.55	1.40	15.4	4,200	500	72.0	630
Spring 1936	3,440	3,290	85	.67	1.66	16.9	4,500	510	63.5	690
$2.50–$3.12:										
Fall 1935	3,580	3,650	87	.63	1.48	17.4	4,500	560	64.5	660
Spring 1936	3,750	3,680	93	.75	1.61	18.0	6,500	600	79.5	720
$3.13–$3.74:										
Spring 1936	3,650	3,730	99	.82	1.79	19.0	7,300	740	107.0	880
East South Central:										
$0.63–$1.24:										
Spring 1935	2,760	2,690	55	.48	1.23	13.3	5,600	310	50.0	390
Summer 1935	2,640	2,560	46	.34	.98	9.8	1,800	240	37.0	250
$1.25–$1.87:										
Spring 1935	3,120	3,060	65	.56	1.34	13.7	3,100	410	46.0	500
Summer 1935	3,050	2,960	62	.49	1.29	13.5	2,600	390	58.0	430
Fall 1935	3,130	3,100	64	.55	1.35	13.6	4,300	390	51.5	480
Winter 1935–36	3,130	3,100	67	.61	1.44	16.0	4,400	470	44.5	520
$1.88–$2.49:										
Spring 1935	3,600	3,570	80	.72	1.60	16.0	6,200	460	65.0	660
Summer 1935	3,300	3,310	72	.67	1.47	13.6	2,900	440	71.0	590
Fall 1935	3,520	3,560	78	.65	1.53	15.2	5,600	520	67.5	610
Winter 1935–36	3,460	3,460	80	.69	1.61	16.5	3,700	530	65.5	610
$2.50–$3.12:										
Spring 1935	3,810	3,820	87	.88	1.76	18.0	8,100	600	94.5	790
Summer 1935	4,120	4,200	94	1.00	1.94	17.3	3,600	580	82.5	860
Fall 1935	3,800	3,870	93	.99	1.92	18.4	7,200	590	82.0	900
Winter 1935–36	4,150	4,020	97	.87	1.90	19.1	6,100	670	79.0	770

TABLE 67.—*Average nutritive value of diets per nutrition-requirement unit per day, by color of family, region, level of expenditure for food, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	International scale energy value	Value per nutrition-requirement unit per day (Bureau of Home Economics scale)								
		Energy value	Protein	Calcium	Phosphorus	Iron	Vitamin A	Vitamin B_1	Ascorbic acid	Riboflavin
White—Continued.										
West South Central:										
$1.25–$1.87:	*Calories*	*Calories*	*Grams*	*Gram*	*Grams*	*Milligrams*	*International Units*	*International Units*	*Milligrams*	*Sherman units*
Spring 1936	2,830	2,690	61	0.47	1.08	11.6	2,100	340	30.5	450
$1.88–$2.49:										
Spring 1936	3,070	3,230	78	.57	1.36	14.7	3,000	470	45.0	610
$2.50–$3.12:										
Spring 1936	4,070	4,030	90	.62	1.47	17.4	5,800	580	73.5	730
Mountain:										
$1.25–$1.87:										
Summer 1935	2,590	2,470	59	.48	1.10	10.7	3,600	300	65.5	500
$1.88–$2.49:										
Spring 1935	2,900	2,800	76	.68	1.37	14.7	4,900	460	96.0	720
Summer 1935	3,160	3,090	71	.58	1.24	13.4	3,600	420	80.0	590
$2.50–$3.12:										
Spring 1935	3,570	3,610	89	.73	1.49	15.4	3,800	480	79.0	750
Summer 1935	3,280	3,200	83	.70	1.40	15.5	3,700	490	88.0	750
$3.13–$3.74:										
Summer 1935	3,740	3,770	97	.84	1.63	16.4	3,800	460	81.5	760
Pacific:										
$1.25–$1.87:										
Summer 1935	2,490	2,460	59	.44	1.05	10.8	2,800	380	60.5	490
Winter 1935–36	2,670	2,680	66	.50	1.26	14.8	3,800	520	77.0	600
$1.88–$2.49:										
Spring 1935	3,100	3,040	78	.58	1.33	14.3	4,100	460	88.0	650
Summer 1935	3,110	3,100	73	.64	1.33	13.8	3,600	460	80.0	630
Fall 1935	3,360	3,340	78	.66	1.41	14.4	3,700	510	62.0	710
Winter 1935–36	2,970	2,930	77	.62	1.36	14.7	4,400	490	77.5	710
$2.50–$3.12:										
Spring 1935	3,700	3,690	87	.74	1.56	16.2	4,400	520	95.5	740
Summer 1935	3,400	3,500	85	.68	1.47	16.0	4,600	540	104.0	740
Fall 1935	3,700	3,780	92	.72	1.65	17.3	4,500	520	79.0	750
Winter 1935–36	3,740	3,660	94	.68	1.63	18.7	4,500	580	94.0	760
$3.13–$3.74:										
Spring 1935	4,090	4,040	105	.87	1.87	19.9	6,100	540	108.5	880
Summer 1935	4,060	4,240	98	.79	1.70	19.2	6,000	560	118.0	820
Fall 1935	4,380	4,380	103	.87	1.86	19.7	4,800	670	108.5	920
Winter 1935–36	3,870	3,900	98	.87	1.72	17.7	4,800	560	93.0	850
$3.75–$4.37:										
Spring 1935	4,090	4,080	107	.87	1.78	19.6	6,900	590	126.0	910
Summer 1935	4,060	4,450	113	.93	1.85	18.8	4,700	640	115.0	870
Winter 1935–36	4,480	4,500	113	.84	1.82	21.1	5,700	680	111.0	920
$4.38 and over:										
Spring 1935	5,520	5,610	141	1.25	2.36	24.9	11,000	780	160.0	1,150
Summer 1935	5,340	5,580	135	1.19	2.27	23.8	5,700	770	166.0	1,160
Winter 1935–36	4,920	5,080	145	.95	2.25	25.0	8,000	750	126.5	1,100
Negro:										
South:										
$0.63–$1.24:										
Spring 1935	2,470	2,390	51	.32	1.04	12.4	4,400	310	31.5	350
Summer 1935	2,580	2,480	50	.32	1.08	12.4	1,900	330	33.5	280
Fall 1935	2,630	2,480	51	.34	1.07	11.8	4,500	340	35.0	320
$1.25–$1.87:										
Spring 1935	3,530	3,560	73	.61	1.47	16.9	9,400	540	65.0	570
Summer 1935	3,540	3,500	67	.51	1.40	15.5	3,800	460	56.0	440
Fall 1935	3,270	3,300	71	.51	1.34	15.4	6,600	440	52.0	510
$1.88–$2.49:										
Spring 1935	3,790	3,860	88	.68	1.62	20.1	9,700	650	68.5	720
Summer 1935	4,360	4,580	93	.61	1.81	18.6	3,200	520	54.0	640
Fall 1935	4,330	4,490	85	.73	1.77	18.9	6,600	640	61.0	580
$2.50–$3.12:										
Summer 1935	4,550	4,570	104	.84	1.93	19.0	5,400	690	81.5	720
Fall 1935	5,050	5,180	118	1.01	2.22	24.5	10,600	740	88.5	900

TABLE 68.—*Average energy value of diets, and percentage of calories derived from specified classes of food, by color of family, region, level of food expenditure, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food,[1] and season	Energy value per day			Calories derived from—							
	Per unit, international scale	Per unit, Bureau of Home Economics scale	Per capita	Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White:											
North Atlantic:	*Calories*	*Calories*	*Calories*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
$1.25–$1.87:											
Winter 1934–35	2, 780	2, 680	2, 130	9. 2	12. 6	15. 7	12. 7	32. 1	11. 7	5. 5	0. 5
Spring 1935	2, 620	2, 550	1, 970	11. 7	12. 8	15. 6	12. 6	32. 8	9. 7	3. 7	1. 1
Summer 1935	2, 480	2, 390	1, 940	10. 6	11. 3	14. 3	13. 2	37. 1	7. 9	4. 7	. 9
Fall 1935	2, 610	2, 530	2, 020	9. 9	13. 4	12. 7	10. 2	39. 2	8. 6	5. 1	. 9
Winter 1935–36	2, 650	2, 610	1, 940	14. 3	9. 3	14. 0	14. 5	36. 2	5. 6	5. 2	. 9
$1.88–$2.49:											
Spring 1935	2, 950	2, 910	2, 320	10. 7	13. 1	15. 7	13. 9	30. 6	8. 9	5. 7	1. 4
Summer 1935	2, 940	3, 040	2, 310	12. 1	12. 9	15. 8	13. 0	32. 1	6. 7	6. 4	1. 0
Fall 1935	3, 060	3, 060	2, 430	10. 7	13. 6	14. 2	11. 6	34. 1	8. 6	5. 9	1. 3
Winter 1935–36	2, 880	2, 810	2, 300	10. 6	15. 3	13. 8	11. 1	35. 9	6. 6	5. 8	. 9
$2.50–$3.12:											
Winter 1934–35	3, 410	3, 480	2, 780	9. 8	14. 6	17. 1	12. 4	30. 3	8. 7	6. 0	1. 1
Spring 1935	3, 410	3, 440	2, 780	10. 5	14. 6	17. 5	11. 9	31. 0	7. 6	6. 0	. 9
Summer 1935	3, 170	3, 170	2, 580	13. 2	14. 9	14. 2	11. 8	30. 0	7. 3	7. 6	1. 0
Fall 1935	3, 390	3, 420	2, 750	11. 2	15. 0	14. 9	11. 7	30. 8	8. 2	7. 1	1. 1
Winter 1935–36	2, 960	3, 020	2, 510	10. 6	18. 3	14. 9	10. 1	31. 7	6. 7	6. 3	1. 4
$3.13–$3.74:											
Spring 1935	3, 780	3, 970	3, 160	10. 0	14. 8	16. 8	11. 1	31. 1	7. 8	7. 2	1. 2
Summer 1935	3, 440	3, 680	2, 910	11. 0	15. 9	15. 9	11. 5	30. 6	6. 2	8. 0	. 9
Fall 1935	3, 940	4, 070	3, 200	9. 8	17. 1	14. 0	10. 8	31. 2	7. 7	8. 2	1. 2
Winter 1935–36	3, 490	3, 650	2, 900	12. 0	16. 7	15. 0	12. 0	28. 4	6. 7	8. 1	1. 1
$3.75–$4.37:											
Winter 1934–35	4, 030	4, 000	3, 420	10. 1	18. 9	14. 0	11. 4	26. 8	8. 3	9. 9	. 6
Spring 1935	4, 380	4, 500	3, 590	11. 5	15. 7	16. 3	11. 3	29. 6	6. 2	8. 4	1. 0
Summer 1935	3, 950	4, 080	3, 370	11. 1	19. 1	16. 0	12. 1	28. 6	5. 4	6. 9	. 8
Winter 1935–36	3, 790	3, 980	3, 290	8. 6	18. 8	14. 4	10. 3	31. 5	7. 0	8. 3	1. 1
$4.38 and over:											
Spring 1935	4, 930	5, 050	4, 120	11. 4	17. 5	18. 7	11. 4	25. 7	4. 9	8. 5	1. 9
Winter 1935–36	4, 080	4, 140	3, 530	9. 7	18. 7	20. 2	9. 8	28. 3	5. 6	6. 2	1. 5
East North Central:											
$1.25–$1.87:											
Spring 1935	2, 820	2, 680	2, 120	10. 2	11. 9	19. 0	6. 5	35. 8	11. 1	4. 7	. 8
Summer 1935	2, 650	2, 570	2, 110	10. 8	11. 0	17. 9	12. 9	33. 7	8. 2	4. 9	. 6
Spring 1936	2, 680	2, 600	2, 100	10. 0	14. 2	17. 3	12. 5	32. 3	7. 8	4. 7	1. 2
Summer 1936	2, 540	2, 400	1, 900	9. 3	17. 2	14. 2	8. 5	39. 1	5. 8	5. 0	. 9
Fall 1936	2, 940	2, 830	2, 200	8. 9	13. 0	18. 7	8. 6	36. 1	8. 2	5. 6	. 9
$1.88–$2.49:											
Spring 1935	2, 930	2, 950	2, 470	10. 0	14. 1	18. 7	10. 7	31. 3	7. 7	6. 4	1. 1
Summer 1935	3, 180	3, 160	2, 520	11. 0	12. 1	16. 1	15. 0	30. 6	8. 2	5. 8	1. 2
Spring 1936	3, 290	3, 200	2, 490	9. 4	13. 2	17. 3	10. 4	34. 2	8. 1	6. 3	1. 1
Summer 1936	3, 370	3, 260	2, 520	10. 5	16. 3	14. 2	9. 4	36. 0	6. 1	6. 5	1. 0
Fall 1936	3, 180	3, 070	2, 570	9. 2	14. 4	17. 3	11. 5	31. 6	8. 7	6. 3	1. 0
Winter 1936–37	3, 400	3, 200	2, 610	8. 7	18. 2	16. 9	9. 3	32. 3	8. 5	4. 9	1. 2
$2.50–$3.12:											
Spring 1935	3, 780	3, 820	3, 050	10. 6	12. 2	15. 8	12. 0	31. 7	9. 0	7. 5	1. 2
Summer 1935	4, 020	3, 980	3, 220	8. 0	10. 3	17. 8	16. 9	31. 1	8. 1	6. 6	1. 2
Spring 1936	3, 650	3, 550	3, 010	9. 7	14. 9	18. 5	10. 7	31. 6	7. 5	6. 1	1. 0
Summer 1936	3, 410	3, 370	2, 760	9. 3	16. 2	16. 5	11. 0	32. 9	5. 8	7. 3	1. 0
Fall 1936	3, 830	3, 760	3, 120	10. 8	15. 4	18. 7	12. 1	27. 3	7. 1	7. 3	1. 3
Winter 1936–37	3, 880	3, 720	3, 080	11. 8	17. 8	14. 5	10. 0	29. 8	9. 4	5. 7	1. 0
$3.13–$3.74:											
Spring 1935	4, 220	4, 190	3, 480	11. 2	13. 1	19. 1	13. 7	28. 7	5. 6	7. 4	1. 2
Spring 1936	4, 500	4, 420	3, 570	9. 5	16. 3	16. 0	13. 4	30. 6	6. 3	6. 3	1. 6
Summer 1936	4, 220	4, 190	3, 520	8. 1	17. 2	15. 7	13. 1	32. 4	6. 2	6. 2	1. 1
Fall 1936	4, 490	4, 330	3, 550	10. 9	17. 2	16. 2	14. 1	28. 5	5. 8	6. 1	1. 2
$3.75–$4.37:											
Summer 1936	4, 440	4, 440	3, 870	6. 7	20. 2	20. 6	9. 9	28. 3	6. 4	6. 6	1. 3
West North Central:											
$1.25–$1.87:											
Spring 1936	2, 470	2, 310	1, 990	10. 7	16. 7	15. 6	8. 7	34. 2	8. 2	5. 2	. 7
$1.88–$2.49:											
Spring 1936	3, 160	3, 030	2, 380	13. 4	14. 7	15. 3	11. 1	28. 6	8. 1	7. 7	1. 1
Summer 1936	3, 480	3, 230	2, 550	11. 5	13. 7	13. 0	13. 4	35. 1	7. 2	4. 4	1. 7

[1] See footnote 1, table 3.

TABLE 68.—*Average energy value of diets, and percentage of calories derived from specified classes of food, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Energy value per day			Calories derived from—							
	Per unit, international scale	Per unit, Bureau of Home Economics scale	Per capita	Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White—Continued.											
West North Central—Con.	*Calories*	*Calories*	*Calories*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
$2.50–$3.12:											
Spring 1936	3, 400	3, 240	2, 750	10. 6	16. 7	16. 4	10. 6	31. 5	6. 2	6. 8	1. 2
Summer 1936	3, 560	3, 430	2, 890	9. 3	17. 1	19. 9	10. 3	32. 3	5. 3	5. 0	. 8
$3.13–$3.74:											
Spring 1936	3, 740	3, 720	3, 100	9. 2	16. 4	17. 7	10. 9	29. 7	7. 4	7. 1	1. 6
Summer 1936	3, 720	3, 750	3, 250	11. 9	14. 0	18. 1	8. 5	30. 0	8. 6	7. 5	1. 4
South Atlantic:											
$1 .25–$1.87:											
Fall 1935	3, 040	2, 990	2, 350	7. 4	12. 5	19. 6	14. 8	31. 1	8. 8	5. 4	. 4
Spring 1936	2, 590	2, 490	1, 960	7. 1	12. 5	21. 0	10. 8	32. 1	10. 8	5. 3	. 4
$1 88–$2. 49:											
Fall 1935	3, 150	3, 150	2, 580	7. 4	14. 0	20. 5	10. 3	30. 7	9. 1	7. 0	1. 0
Spring 1936	3, 440	3, 290	2, 790	7. 9	14. 4	22. 5	10. 9	33. 2	5. 6	5. 0	. 5
$2.50–$3.12:											
Fall 1935	3, 580	3, 650	2, 850	8. 4	14. 6	18. 4	12. 9	30. 1	7. 4	7. 0	1. 2
Spring 1936	3, 750	3, 680	3, 050	7. 0	15. 0	27. 4	10. 9	27. 9	4. 7	6. 6	. 5
$3.13–$3.74:											
Spring 1936	3, 650	3, 730	3, 050	9. 8	17. 0	22. 3	10. 2	25. 6	6. 1	8. 0	1. 0
East South Central:											
$0.63–$1.24:											
Spring 1935	2, 760	2, 690	2, 110	5. 4	8. 6	25. 5	10. 0	41. 7	4. 7	4. 1	0
Summer 1935	2, 640	2, 560	1, 950	3. 8	6. 6	27. 6	15. 2	35. 5	5. 0	5. 5	. 8
$1.25–$1.87:											
Spring 1935	3, 120	3, 060	2, 350	9. 0	8. 7	22. 3	12. 9	33. 6	7. 6	4. 6	1. 3
Summer 1935	3, 050	2, 960	2, 400	6. 7	8. 2	23. 6	14. 5	33. 8	5. 7	6. 5	1. 0
Fall 1935	3, 130	3, 100	2, 400	7. 3	8. 7	21. 9	14. 0	34. 6	7. 4	4. 9	1. 2
Winter 1935–36	3, 130	3, 100	2, 470	8. 0	10. 4	22. 4	13. 1	31. 7	10. 0	4. 6	. 2
$1.88–$2.49:											
Spring 1935	3, 600	3, 570	2, 980	6. 9	10. 4	25. 9	12. 0	32. 2	7. 1	4. 8	. 7
Summer 1935	3, 300	3, 310	2, 680	10. 4	8. 7	21. 6	17. 2	28. 3	5. 0	7. 6	1. 2
Fall 1935	3, 520	3, 560	2, 820	7. 6	10. 7	24. 3	13. 2	29. 7	8. 8	5. 2	. 5
Winter 1935–36	3, 460	3, 460	2, 810	8. 4	13. 0	21. 9	12. 3	30. 1	7. 9	5. 7	. 7
$2.50–$3.12:											
Spring 1935	3, 810	3, 820	3, 120	10. 1	10. 3	25. 1	11. 9	28. 1	5. 4	7. 2	1. 9
Summer 1935	4, 120	4, 200	3, 330	13. 4	9. 7	22. 3	15. 7	24. 8	6. 0	7. 0	1. 1
Fall 1935	3, 800	3, 870	3, 090	12. 9	12. 4	20. 4	12. 8	27. 1	6. 3	7. 8	. 3
Winter 1935–36	4, 150	4, 020	3, 200	9. 3	13. 2	21. 4	11. 8	30. 7	7. 3	5. 5	. 9
West South Central:											
$1.25–$1.87:											
Spring 1936	2, 830	2, 690	2, 150	10. 6	9. 7	19. 5	14. 5	33. 8	6. 6	4. 2	1. 1
$1.88–$2.49:											
Spring 1936	3, 070	3, 230	2, 480	11. 1	13. 2	20. 2	11. 4	30. 5	6. 9	5. 9	. 8
$2.50–$3.12:											
Spring 1936	4, 070	4, 030	3, 370	6. 9	13. 9	23. 8	17. 2	25. 3	5. 9	6. 2	. 8
Mountain:											
$1.25–$1.87:											
Summer 1935	2, 590	2, 470	1, 990	12. 8	10. 1	17. 1	13. 3	29. 6	6. 5	9. 0	1. 6
$1.88–$2.49:											
Spring 1935	2, 900	2, 800	2, 210	15. 8	14. 3	15. 3	12. 0	25. 3	7. 0	9. 3	1. 0
Summer 1935	3, 160	3, 090	2, 470	11. 0	12. 0	16. 4	16. 9	27. 5	5. 3	9. 4	1. 5
$2.50–$3.12:											
Spring 1935	3, 570	3, 610	2, 780	13. 2	16. 9	18. 6	14. 1	24. 6	4. 5	5. 8	2. 3
Summer 1935	3, 280	3, 200	2, 520	13. 1	13. 2	18. 5	13. 0	25. 6	6. 2	9. 6	. 8
$3.13–$3.74:											
Summer 1935	3, 740	3, 770	3, 190	12. 5	13. 8	19. 0	13. 7	26. 9	4. 3	7. 7	2. 1
Pacific:											
$1.25–$1.87:											
Summer 1935	2, 490	2, 460	1, 860	14. 0	12. 4	18. 0	9. 5	31. 0	5. 6	9. 3	. 2
Winter 1935–36	2, 670	2, 680	2, 130	10. 0	10. 6	17. 9	9. 5	30. 1	8. 3	10. 8	2. 8
$1.88–$2.49:											
Spring 1935	3, 100	3, 040	2, 450	10. 3	13. 8	16. 5	10. 8	32. 9	5. 7	8. 3	1. 7
Summer 1935	3, 110	3, 100	2, 390	13. 2	11. 1	15. 2	14. 9	28. 0	6. 2	9. 9	1. 5
Fall 1935	3, 360	3, 340	2, 630	12. 4	11. 1	16. 1	13. 4	29. 0	7. 4	9. 3	1. 3
Winter 1935–36	2, 970	2, 930	2, 320	12. 8	15. 3	17. 0	9. 2	27. 4	6. 6	9. 8	1. 9

TABLE 68.—*Average energy value of diets, and percentage of calories derived from specified classes of food, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food, and season	Energy value per day			Calories derived from—							
	Per unit, international scale	Per unit, Bureau of Home Economics scale	Per capita	Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White—Continued.											
Pacific—Continued.	*Calories*	*Calories*	*Calories*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
$2.50–$3.12:											
Spring 1935	3,700	3,690	3,030	11.1	10.8	19.7	15.6	26.9	7.4	7.4	1.1
Summer 1935	3,400	3,500	2,750	11.2	14.2	18.6	12.8	25.0	5.3	11.0	1.9
Fall 1935	3,700	3,780	3,120	10.3	13.8	16.8	12.2	28.5	7.1	8.8	2.5
Winter 1935–36	3,740	3,660	2,860	10.1	15.0	17.1	9.4	29.2	8.2	8.8	2.2
$3.13–$3.74:											
Spring 1935	4,090	4,040	3,430	11.5	13.6	16.6	11.2	28.3	9.6	7.5	1.7
Summer 1935	4,060	4,240	3,320	10.3	13.0	19.5	13.5	26.4	4.1	11.6	1.6
Fall 1935	4,380	4,380	3,570	10.7	12.2	18.6	15.0	23.6	7.6	10.9	1.4
Winter 1935–36	3,870	3,900	3,280	11.1	13.1	18.0	12.9	30.3	4.1	9.1	1.4
$3.75–$4.37:											
Spring 1935	4,090	4,080	3,410	9.8	14.9	19.9	8.9	29.5	5.0	10.3	1.7
Summer 1935	4,060	4,450	3,590	10.7	15.4	17.7	16.6	24.5	3.3	10.4	1.4
Winter 1935–36	4,480	4,500	3,760	8.3	17.5	25.9	8.4	23.9	5.3	9.2	1.5
$4.38 and over:											
Spring 1935	5,520	5,610	4,870	10.5	14.0	17.3	17.5	27.4	3.2	9.0	1.1
Summer 1935	5,340	5,580	4,660	10.1	13.9	22.1	15.1	20.9	5.2	10.9	1.8
Winter 1935–36	4,920	5,080	4,350	7.2	18.6	21.1	8.2	26.4	5.4	9.5	3.6
Negro:											
South:											
$0.63–$1.24:											
Spring 1935	2,470	2,390	1,890	2.9	11.0	28.1	11.7	35.1	8.4	2.5	.3
Summer 1935	2,580	2,480	1,930	2.3	9.8	26.2	12.4	39.4	5.9	3.9	.1
Fall 1935	2,630	2,480	2,010	2.2	10.6	24.4	13.4	37.1	10.0	1.9	.4
$1.25–$1.87:											
Spring 1935	3,530	3,560	2,890	2.8	11.2	30.3	9.5	34.7	8.6	2.8	.1
Summer 1935	3,540	3,500	2,860	3.3	10.1	31.4	14.2	32.0	4.1	4.5	.4
Fall 1935	3,270	3,300	2,650	3.5	13.0	26.9	11.5	33.4	8.0	3.0	.7
$1.88–$2.49:											
Spring 1935	3,790	3,860	3,190	4.1	16.8	26.1	12.3	31.0	6.6	3.1	0
Summer 1935	4,360	4,580	3,700	2.9	9.8	31.6	11.9	36.7	3.5	3.1	.5
Fall 1935	4,330	4,490	3,680	3.5	10.6	30.8	13.8	31.2	6.4	3.7	0
$2.50–$3.12:											
Summer 1935	4,550	4,570	4,030	5.4	12.7	30.1	12.6	30.4	2.8	5.4	.6
Fall 1935	5,050	5,180	4,400	5.4	12.8	26.6	11.5	33.5	5.6	4.3	.3

TABLE 69.—*Percentage of money allocated to specified classes of food, by color of family, region, level of food expenditure, and season, December 1934–February 1937*

Color of family, region, weekly per-capita expenditure for food[1] and season	Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White:								
North Atlantic:								
$1.25–$1.87:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Winter 1934–35	13.3	26.9	11.7	4.7	18.8	6.1	15.4	3.1
Spring 1935	15.4	27.7	11.5	4.1	19.7	3.7	12.4	5.5
Summer 1935	15.3	26.5	9.1	4.1	20.7	3.8	15.4	5.1
Fall 1935	14.2	31.7	8.7	3.3	20.8	4.0	11.9	5.4
Winter 1935–36	21.0	23.9	8.7	4.1	19.3	3.5	14.1	5.4
$1.88–$2.49:								
Spring 1935	13.2	28.9	10.5	4.5	17.2	3.3	15.9	6.5
Summer 1935	16.0	28.4	9.3	3.8	17.7	3.0	16.4	5.4
Fall 1935	14.3	32.1	9.2	3.6	18.2	3.6	13.2	5.8
Winter 1935–36	13.2	35.4	9.5	3.1	18.4	3.2	12.3	4.9
$2.50–$3.12:								
Winter 1934–35	12.1	30.5	10.6	4.2	17.6	3.4	15.7	5.9
Spring 1935	12.3	32.2	10.7	3.4	16.5	2.8	16.5	5.6
Summer 1935	15.5	30.2	7.9	3.1	15.4	2.9	19.1	5.9
Fall 1935	14.4	34.1	9.1	3.4	15.5	3.6	14.3	5.6
Winter 1935–36	12.2	38.1	8.6	2.5	16.2	3.4	13.1	5.9

[1] See footnote 1, table 3.

TABLE 69.—*Percentage of money allocated to specified classes of food, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food and season	Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White—Continued.								
North Atlantic—Continued.								
$3.13–$3.74:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Spring 1935	11.3	30.3	9.8	2.7	16.7	3.0	20.0	6.2
Summer 1935	12.9	31.9	8.7	2.8	16.3	2.4	18.9	6.1
Fall 1935	11.8	35.0	9.0	3.2	16.1	3.3	15.3	6.3
Winter 1935–36	13.0	37.6	9.0	2.5	14.6	3.2	15.4	4.7
$3.75–$4.37:								
Winter 1934–35	10.5	32.9	8.9	3.7	13.0	2.6	22.5	5.9
Spring 1935	12.9	32.7	9.4	3.1	14.6	2.1	20.1	5.1
Summer 1935	12.4	35.2	9.1	2.8	14.3	2.3	18.5	5.4
Winter 1935–36	9.4	38.9	9.4	2.3	14.8	3.3	15.4	6.5
$4.38 and over:								
Spring 1935	11.1	36.2	11.3	2.2	12.7	2.3	17.7	6.5
Winter 1935–36	11.5	35.8	9.6	2.9	12.1	2.6	19.0	6.5
East North Central:								
$1.25–$1.87:								
Spring 1935	14.3	26.5	10.7	3.0	20.9	4.8	15.1	4.7
Summer 1935	15.0	22.1	10.8	5.2	19.0	3.7	18.2	6.0
Spring 1936	13.7	26.5	10.0	4.7	18.2	5.3	15.4	6.2
Summer 1936	11.2	30.9	8.9	3.4	20.5	5.3	14.8	5.0
Fall 1936	12.4	23.1	12.0	4.4	21.0	5.6	16.1	5.4
$1.88–$2.49:								
Spring 1935	12.1	29.6	10.6	3.4	18.0	3.1	16.8	6.4
Summer 1935	13.1	26.5	10.0	4.6	16.4	4.0	18.8	6.6
Spring 1936	12.4	24.8	9.9	3.8	18.4	4.8	18.8	7.1
Summer 1936	13.1	28.9	8.4	3.2	16.2	6.2	18.3	5.7
Fall 1936	12.3	28.7	10.3	3.8	17.2	5.6	16.3	5.8
Winter 1936–37	12.1	31.2	9.6	3.5	18.0	5.7	13.5	6.4
$2.50–$3.12:								
Spring 1935	13.7	26.5	10.0	4.1	17.0	2.8	19.1	6.8
Summer 1935	10.6	24.2	11.2	5.8	16.4	3.9	20.5	7.4
Spring 1936	11.8	27.8	10.8	3.4	17.0	4.4	19.4	5.4
Summer 1936	10.1	29.8	8.7	3.1	16.6	4.6	19.9	7.2
Fall 1936	13.9	28.6	10.8	4.2	14.9	4.4	16.5	6.7
Winter 1936–37	14.5	30.5	8.5	4.7	15.7	5.9	14.6	5.6
$3.13–$3.74:								
Spring 1935	13.1	26.5	11.6	4.0	14.7	2.4	21.2	6.5
Spring 1936	10.8	27.3	9.2	5.6	15.7	4.5	18.5	8.4
Summer 1936	9.1	30.6	9.3	4.1	17.6	5.5	18.6	5.2
Fall 1936	13.6	31.3	8.5	4.9	15.0	3.9	15.0	7.8
$3.75–$4.37:								
Summer 1936	7.5	36.6	10.2	2.6	13.2	5.7	17.3	6.9
West North Central:								
$1.25–$1.87:								
Spring 1936	13.3	27.5	9.3	3.4	20.6	5.1	14.9	5.9
$1.88–$2.49:								
Spring 1936	15.9	24.6	9.8	3.9	15.3	4.2	19.7	6.6
Summer 1936	15.1	26.2	8.6	4.3	19.0	5.6	15.1	6.1
$2.50–$3.12:								
Spring 1936	12.3	27.9	10.0	3.2	18.0	3.5	19.6	5.5
Summer 1936	10.2	31.3	11.1	2.9	17.6	4.5	16.3	6.1
$3.13–$3.74:								
Spring 1936	9.7	27.3	10.9	3.8	16.7	4.2	20.5	6.9
Summer 1936	12.6	25.4	9.3	2.1	16.3	5.8	22.8	5.7
South Atlantic:								
$1.25–$1.87:								
Fall 1935	14.1	31.4	12.3	5.3	15.1	4.5	12.4	4.9
Spring 1936	11.1	29.4	10.5	3.7	16.6	8.1	17.1	3.5
$1.88–$2.49:								
Fall 1935	10.9	33.6	10.9	3.8	17.1	3.8	15.4	4.5
Spring 1936	12.7	31.9	11.2	4.2	15.5	4.2	15.6	4.7
$2.50–$3.12:								
Fall 1935	11.3	32.0	10.3	4.7	16.1	3.6	15.7	6.3
Spring 1936	10.2	34.4	15.1	3.6	12.7	2.9	17.5	3.6
$3.13–$3.74:								
Spring 1936	12.7	31.7	10.0	2.9	13.3	3.7	20.6	5.1
East South Central:								
$0.63–$1.24:								
Spring 1935	11.1	22.8	17.1	4.3	22.1	3.9	13.5	5.2
Summer 1935	6.7	19.4	18.7	7.8	18.7	3.4	18.8	6.5
$1.25–$1.87:								
Spring 1935	13.3	20.8	14.5	5.9	18.1	5.0	14.9	7.5
Summer 1935	11.0	22.4	14.9	6.1	17.3	3.7	17.9	6.6
Fall 1935	12.1	21.8	14.3	8.2	17.2	4.7	14.4	7.3
Winter 1935–36	13.7	25.8	14.2	6.2	15.5	7.1	13.1	4.4

Table 69.—*Percentage of money allocated to specified classes of food, by color of family, region, level of food expenditure, and season, December 1934–February 1937*—Continued

Color of family, region, weekly per-capita expenditure for food and season	Milk, cheese, ice cream	Eggs, lean meat, poultry, fish	Butter, other fats, oils, fat meat	Sugars	Grain products	Potatoes, mature beans and peas, nuts	Other vegetables, fruits	Miscellaneous items
White—Continued.								
East South Central—Continued.								
$1.88–$2.49:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Spring 1935	10.8	24.3	14.0	5.1	16.8	5.0	16.7	7.4
Summer 1935	14.9	22.5	12.3	6.1	15.4	3.0	18.8	7.0
Fall 1935	11.5	26.8	14.9	5.8	15.4	5.1	14.4	6.1
Winter 1935–36	12.6	29.2	12.9	6.4	12.0	4.8	16.1	6.0
$2.50–$3.12:								
Spring 1935	14.9	25.0	13.4	4.3	12.7	3.6	18.4	7.7
Summer 1935	17.3	22.3	12.9	5.2	12.7	2.9	18.9	7.8
Fall 1935	17.6	28.6	11.0	5.3	13.1	3.3	16.8	4.3
Winter 1935–36	12.4	28.0	10.9	5.3	15.6	3.7	21.9	2.1
West South Central:								
$1.25–$1.87:								
Spring 1936	16.6	21.6	11.2	6.1	17.7	4.8	13.5	8.5
$1.88–$2.49:								
Spring 1936	13.7	25.8	10.7	4.4	17.0	4.7	17.9	5.8
$2.50–$3.12:								
Spring 1936	11.1	26.7	13.2	5.7	13.2	4.3	19.7	6.1
Mountain:								
$1.25–$1.87:								
Summer 1935	14.9	20.8	11.0	4.8	14.3	3.8	24.4	6.0
$1.88–$2.49:								
Spring 1935	13.6	27.4	9.7	3.9	13.2	2.9	23.4	5.9
Summer 1935	12.7	23.9	11.2	5.2	15.1	2.8	23.8	5.3
$2.50–$3.12:								
Spring 1935	12.8	31.4	10.9	4.2	13.7	2.4	17.0	7.6
Summer 1935	12.9	26.7	11.4	3.8	12.3	3.0	23.3	6.6
$3.13–$3.74:								
Summer 1935	11.9	31.0	12.0	3.2	13.5	1.9	18.1	8.4
Pacific:								
$1.25–$1.87:								
Summer 1935	17.0	24.5	11.2	2.5	18.9	2.6	17.8	5.5
Winter 1935–36	12.8	21.0	12.0	4.0	16.6	5.2	20.2	8.2
$1.88–$2.49:								
Spring 1935	12.4	26.2	10.1	3.4	16.5	3.0	20.9	7.5
Summer 1935	15.6	22.6	10.3	4.2	15.5	3.0	21.8	7.0
Fall 1935	15.0	23.8	12.4	5.0	15.1	4.0	17.1	7.6
Winter 1935–36	14.1	27.0	10.8	3.0	14.7	3.9	18.8	7.7
$2.50–$3.12:								
Spring 1935	12.9	22.4	12.2	5.8	13.9	4.4	19.5	8.9
Summer 1935	12.0	27.2	11.3	2.7	13.8	2.6	22.3	8.1
Fall 1935	11.8	28.1	12.6	4.6	15.8	3.8	15.7	7.6
Winter 1935–36	12.5	26.7	11.1	3.3	15.3	4.7	18.3	8.1
$3.13–$3.74:								
Spring 1935	11.8	23.1	10.9	3.8	15.6	4.9	20.7	9.2
Summer 1935	11.0	27.0	12.4	3.9	14.2	1.9	22.4	7.2
Fall 1935	11.4	27.4	14.4	4.9	12.2	3.3	18.5	7.9
Winter 1935–36	11.2	26.8	11.7	4.9	16.2	2.6	20.1	6.5
$3.75–$4.37:								
Spring 1935	9.5	26.5	11.9	3.4	14.1	3.5	23.8	7.3
Summer 1935	9.7	28.3	11.0	5.1	12.1	1.3	23.8	8.7
Winter 1935–36	8.3	32.3	13.8	3.2	14.0	2.8	18.4	7.1
$4.38 and over:								
Spring 1935	10.6	25.9	11.5	5.8	14.9	2.3	21.4	7.6
Summer 1935	9.6	26.3	12.7	3.9	10.7	2.9	26.1	7.8
Winter 1935–36	7.4	32.9	13.0	2.4	12.2	2.9	18.4	10.8
Negro:								
South:								
$0.63–$1.24:								
Spring 1935	6.3	30.3	19.7	5.4	17.1	6.2	10.4	4.6
Summer 1935	4.7	30.7	18.2	6.4	17.6	4.5	13.4	4.5
Fall 1935	5.1	29.9	18.6	7.0	18.8	7.2	8.4	5.0
$1.25–$1.87:								
Spring 1935	6.0	27.5	21.7	5.8	16.2	6.2	10.6	6.0
Summer 1935	6.1	27.0	22.8	6.8	13.6	3.3	15.0	5.4
Fall 1935	7.0	33.3	18.8	5.8	15.8	5.0	9.2	5.1
$1.88–$2.49:								
Spring 1935	6.5	39.1	14.2	5.3	15.5	3.8	11.2	4.4
Summer 1935	6.1	28.4	20.7	6.9	18.2	3.1	12.2	4.4
Fall 1935	6.2	28.5	22.7	7.4	14.7	4.1	11.5	4.9
$2.50–$3.12:								
Summer 1935	9.2	35.0	20.0	5.2	12.5	1.6	12.0	4.5
Fall 1935	8.8	33.6	18.0	4.6	15.9	3.8	10.3	5.0

TABLE 70.—*Families of two or more persons on relief in the month when relief was at a maximum during the period of the survey of income and disbursements by the United States Bureau of Labor Statistics*

Color of family and reporting area	Date of maximum relief load during period of survey (month and year)	Families of two or more persons on relief in that month	Average size of families on relief	Percentage which these relief families were of total number of families of two or more persons in 1930
White families (other than Mexican):				
North Atlantic region:		*Number*	*Persons*	*Percent*
Manchester, N. H	[1] May 1934	1,900	[1] 4.5	11.2
Boston, Mass	Feb. 1935	32,100	3.9	20.5
Springfield, Mass	do	6,600	4.3	19.2
New York, N. Y	do	242,800	4.5	16.0
Rochester, N. Y	Dec. 1934	14,000	3.9	18.7
Lancaster County (Lancaster), Pa	Mar. 1934	5,000	4.6	11.2
Philadelphia, Pa	May 1934	44,500	4.5	11.7
Allegheny County (Pittsburgh), Pa	Feb. 1934	53,600	4.6	19.2
East North Central region:				
Marion County (Indianapolis), Ind	Mar. 1935	13,000	4.1	13.9
Detroit, Mich	Dec. 1934	40,800	4.3	12.6
Grand Rapids, Mich	do	8,400	4.0	21.0
Lansing County (Lansing), Mich	Nov. 1934	6,200	4.4	22.2
Hamilton County (Cincinnati), Ohio	Mar. 1935	19,700	4.4	14.9
Franklin County (Columbus), Ohio	Apr. 1934	9,300	4.2	11.9
Milwaukee County (Milwaukee), Wis	Mar. 1935	25,800	4.3	15.5
West North Central region:				
Minneapolis-St. Paul, Minn	May 1935	15,000	3.8	8.8
St. Louis, Mo	do	19,600	4.0	11.0
South Atlantic region:				
Duval County (Jacksonville), Fla	Nov. 1934	4,200	4.0	17.7
East South Central region:				
Jefferson County (Birmingham), Ala	Mar. 1935	13,100	4.8	22.4
Mobile County (Mobile), Ala	Sept. 1934	5,900	4.0	36.0
Shelby County (Memphis), Tenn	Mar. 1934	3,900	4.8	4.4
West South Central region:				
Dallas County (Dallas), Tex	Mar. 1935	6,300	3.4	9.7
Harris County (Houston), Tex	Feb. 1935	6,000	3.9	9.3
Mountain region:				
Salt Lake City, Utah	do	8,400	4.2	19.8
Pacific region:				
Los Angeles County (Los Angeles), Calif	Jan. 1935	82,700	3.4	13.9
Sacramento County (Sacramento), Calif	do	4,700	3.4	16.4
San Francisco, Calif	July 1934	15,700	3.4	11.1
Seattle, Wash	Feb. 1935	11,000	3.6	12.6
Negro families:				
Middle Atlantic region:				
New York, N. Y	do	40,400	----------	52.0
Philadelphia, Pa	May 1934	27,800	3.8	61.5
Allegheny County (Pittsburgh), Pa	Feb. 1934	12,500	3.3	72.5
Southeast region:				
Jefferson County (Birmingham), Ala	Apr. 1934	18,200	4.0	47.2
Shelby County (Memphis), Tenn	Mar. 1934	5,900	4.4	19.6
Mobile County (Mobile), Ala	Sept. 1934	4,600	4.1	50.7
Orleans Parish (New Orleans), La	Nov. 1934	14,400	3.8	49.0
Norfolk, Va	Apr. 1935	3,400	3.4	36.6
Richmond, Va	Nov. 1934	2,200	4.1	19.2

[1] Survey data, not necessarily peak. Data not available for period on city basis.

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